

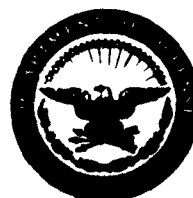
UNCLASSIFIED

---

AD **297 399**

*Reproduced  
by the*

ARMED SERVICES TECHNICAL INFORMATION AGENCY  
ARLINGTON HALL STATION  
ARLINGTON 12, VIRGINIA



---

UNCLASSIFIED

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

NOLTR 62-161

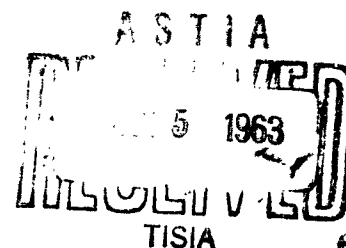
10/

297399

297 399

UNALOGED BY ASTIA  
AS AD NO.

SCATTERING OF LIGHT AT NORMAL  
INCIDENCE BY DIELECTRIC CYLINDERS  
WITH REFRACTIVE INDEX IN THE RANGE  
 $m = 1.400$  to  $m = 3.00$ -- SCATTERING  
COEFFICIENTS



NOL

24 SEPTEMBER 1962

UNITED STATES NAVAL ORDNANCE LABORATORY, WHITE OAK, MARYLAND

NOLTR 62-161

- RELEASED TO ASTIA  
BY THE NAVAL ORDNANCE LABORATORY
- ☒ Without restrictions
  - ☐ For Release to Military and Government Agencies Only.
  - ☐ Approval by BuWeps required for release to contractors.
  - ☐ Approval by BuWeps required for all subsequent release.

SCATTERING OF LIGHT AT NORMAL INCIDENCE  
BY DIELECTRIC CYLINDERS WITH REFRACTIVE INDEX  
IN THE RANGE  $m = 1.400$  to  $m = 3.00$ --  
SCATTERING COEFFICIENTS

by:

Louis F. Libelo

**ABSTRACT:** For the refractive indexes  $m = 1.40, 1.50, 1.60, 2.00,$  and  $3.00$  tables of the complex scattering coefficients are presented. These coefficients arise in the problem of the scattering by a homogeneous, isotropic, dielectric, infinite circular cylinder of normally incident, linearly polarized, plane electromagnetic radiation. The numerical results were obtained by means of the IBM 7090 computer system of the U. S. Naval Ordnance Laboratory. The tables contain not only the scattering coefficients for the incident plane wave polarized parallel to the cylinder axis, but also those for the incident radiation polarized normal to this axis.

For the index of refraction  $m = 1.400$  coefficients for the range of the circumference to wavelength ratio,  $x = 2\pi a/\lambda$ ,  $0.100$  ( $0.150$ )  $13.150$  are included in the tables.

For the index of refraction  $m = 1.500$ , coefficients for several ranges in  $x$  are tabulated, namely,  $0.100$  ( $0.120$ )  $10.900, 11.500$  ( $0.480$ )  $12.940$  and  $11.620$  ( $0.480$ )  $13.060$ .

For  $m = 1.600$  the ranges in  $x$  for which the coefficients have been tabulated are  $0.100$  ( $0.100$ )  $8.200, 8.600$  ( $0.600$ )  $11.000, 8.700$  ( $0.600$ )  $11.100, 8.800$  ( $0.600$ )  $10.600,$  and  $11.800$  ( $0.200$ )  $12.800$ .

For  $m = 2.00$  the ranges in  $x$  for which the coefficients have been tabulated are  $0.100$  ( $0.060$ )  $5.680, 6.000$  ( $0.200$ )  $8.000,$  and  $8.200$  ( $0.400$ )  $10.200$ .

Finally, for the refractive index  $m = 3.00$  we have included in the tables the scattering coefficients for  $x$  in the ranges  $0.100$  ( $0.030$ )  $3.520$  and  $4.000$  ( $0.200$ )  $5.400$ .

Comparison of the results are made where possible with the somewhat limited results found in the literature.

U. S. NAVAL ORDNANCE LABORATORY  
WHITE OAK, MARYLAND


NOLTR 62-161

24 September 1962

This report represents a portion of the results of an investigation of the theory of scattering of electromagnetic radiation by very long isotropic dielectric cylinders. The investigation was carried out as a part of the research program in the Electromagnetics Division of the Physics Research Department of the U. S. Naval Ordnance Laboratory.

To Mrs. J. Hebbert and Mrs. S. Madigosky of the U. S. Naval Ordnance Laboratory, the author extends his grateful acknowledgment for their invaluable assistance in both the computational phases of the work and in the preparation of the tables. Acknowledgement is also due to Prof. J. Mayo Greenberg in the Physics Department of Rensselaer Polytechnic Institute for patiently bringing the author to an appreciation of the utility of this work.

R. E. ODENING  
Captain, USN  
Commander



Z. I. SLAWSKY  
By direction

TABLE OF CONTENTS

	Page
CHAPTER I - GENERAL INTRODUCTION . . . . .	1
CHAPTER II - FORMULATION OF THE PROBLEM . . . . .	2
CHAPTER III - SUMMARY OF THE NUMERICAL RESULTS . . . . .	5
REFERENCES . . . . .	7

TABLES

Table	Title	Page
1	Real and Imaginary parts of the Scattering Coefficients A(N) and B(N) for the Isotropic, Dielectric, Infinite Circular Cylinder. Refractive Index $m = 1.400$ . Range of circumference to wavelength ratio, $x = 2\pi a/\lambda$ ; 0.100(0.150)13.150. . . . .	8
2	Real and Imaginary Parts of the Scattering Coefficients A(N) and B(N) for the Isotropic, Dielectric, Infinite Circular Cylinder. Refractive Index $m = 1.400$ . Range of circumference to wavelength ratio, $x = 2\pi a/\lambda$ ; 0.100(0.150)13.150. . . . .	33
3	Real and Imaginary Parts of the Scattering Coefficients A(N) and B(N) for the Isotropic, Dielectric, Infinite Circular Cylinder. Refractive Index $m = 1.600$ . Rang of circumference to wavelength ratio; $x = 2\pi a/\lambda$ ; 0.100(0.100)8.200, 8.600(0.600)11.000, 8.700(0.600)11.100, 8.800(0.600)10.600, 11.800(0.200)12.800 . . . . .	59
4	Real and Imaginary Parts of the Scattering Coefficients A(N) and B(N) for the Isotropic, Dielectric, Infinite Circular Cylinder. Refractive Index $m = 2.000$ . Range of circumference to wavelength ratio, $x = 2\pi a/\lambda$ ; 0.100(0.060)5.680, 6.000(0.200)8.000, 8.200(0.400)10.200 . . . . .	84

TABLE OF CONTENTS  
(Continued)

Table	Title	Page
5	Real and Imaginary Parts of the Scattering Coefficients $A(N)$ and $B(N)$ for the Isotropic, Dielectric, Infinite Circular Cylinder. Refractive Index $m = 3.000$ . Range of circumference to wavelength ratio, $x = 2\pi a/\lambda$ ; 0.100(0.030)3.520, 4.000(0.200)5.400. . . . .	105

## CHAPTER I

### GENERAL INTRODUCTION

1. In a previous report<sup>1</sup> a quite comprehensive survey was presented of the literature for the problem of scattering of normally incident, linearly polarized, plane electromagnetic waves by infinite elliptic or circular cylinders. Hence, such a range will not be considered here. We shall merely restrict all discussion to homogeneous isotropic circular cylinders.
2. As is well known, Lord Rayleigh<sup>2</sup> was the first to present the complete solution for the case of normal incidence on an infinite circular cylinder. At about the same time the solution was also given, independently, by von Ignatowsky.<sup>3</sup> Many investigators have looked into this problem since. For an extensive listing, the reader is referred to the previous report<sup>1</sup> mentioned above.
3. Although there has been considerable interest in this scattering problem for quite some time, very few useful numerical results are available in the literature. There is the early work of Seitz<sup>4</sup> for scattering by a very long gold wire, assuming a circumference to wavelength ratio of 3.000. Larkin and Churchill<sup>5</sup> obtained some limited numerical values for dielectric cylinders having indexes of refraction  $m = 1.5$ , 2.0, and 2.5. These were produced in the course of an investigation into the scattering properties of the filaments of a porous insulation. Also, one must mention the numerical results obtained by van de Hulst<sup>6</sup>. These include a short table of the complex scattering coefficients for  $m = 1.414-1.414i$ , or, in other words, a partially conducting cylinder. Practically nothing has been reported in the literature for partially conducting circular cylinders outside of the results of van de Hulst except for a recent paper by the present author.<sup>7</sup> For dielectric cylinders the present author has published results<sup>1</sup> for  $m = 1.150$ , 1.200, 1.250, and 1.300. Very recently Farrone, Kerker and Matijević<sup>8</sup> have also reported on calculations for dielectric cylinders.
4. With the results presented in the accompanying tables and those cited above, it would seem that quite good numerical values are now available in the literature for dielectric cylinders.
5. It would probably be of interest to indicate the utility of the numerical results by pointing out some further applications of previous results. Matijević, Ottewill, and Kerker<sup>9</sup> used the



numerical values obtained by Larkin and Churchill in their research into the scattering of light by spider fibers. Also, Libelo and Greenberg<sup>10</sup> have looked into the scattering and polarization of light by a cloud of aligned, long dielectric ( $m = 1.300$ ) grains with a prescribed distribution for the radii. The results have been compared with known astrophysical measurements of the wavelength dependence of polarization and extinction of starlight by the interstellar medium.

## CHAPTER II

### FORMULATION OF THE PROBLEM

6. The mathematical basis and details of the solution of the Maxwell equations for the scattering of linearly polarized, plane electromagnetic waves falling normally on an infinite dielectric circular cylinder has been given by many authors. Included among these are Stratton<sup>11</sup>, Morse and Feshbach<sup>12</sup>, and Mentzer<sup>13</sup>. The reader is referred to these sources for the derivations. Here we shall be content with merely stating the pertinent relations.

7. As has become customary we consider two separate cases. In Case I, referred to as "parallel polarization", the incident wave is polarized parallel to the cylinder axis, whereas in Case II, referred to as "polarization normal to the axis", the magnetic vector of the incident radiation is polarized parallel to the cylinder axis.

8. We assume the cylinder axis coincides with the z-axis and the incident wave is propagating along in the positive direction of the x-axis. In what follows we will use the notation

$\mathcal{H}$  = magnetic field

$Y_N(\alpha)$  = Neumann function of order N

$H_N(\alpha) = J_N(\alpha) - i Y_N(\alpha)$  = Hankel function of the second kind of order N

$k = 2\pi/\lambda$  = the propagation constant of the incident wave

$m$  = index of refraction

$a$  = radius of the cylinder

Case I: Parallel Polarization

9. The external fields ( $r > a$ ) are given by

$$\vec{E}(r, \theta) = (1/mk) \text{curl curl} \{ \vec{u}_z \psi(r, \theta) \} \quad (1)$$

$$\vec{H}(r, \theta) = -m \text{curl} \{ \vec{u}_z \psi(r, \theta) \} \quad (2)$$

where

$$\psi(r, \theta) = \sum_{N=-\infty}^{\infty} \exp[iN\theta + i\omega t] (-1)^N [J_N(kr) - B(N) H_N(kr)] \quad (3)$$

and  $\vec{u}_z$  is a unit vector along the z-axis. The coefficients are readily found to be

$$B(N) = \frac{m J'_N(y) J_N(x) - J_N(y) J'_N(x)}{m J'_N(y) H_N(x) - J_N(y) H'_N(x)} \quad (4)$$

where  $y = mka = mx$ . It is also easy to show that

$$B(N) = B(-N). \quad (5)$$

The scattered wave is found for  $kr \gg 1$  from

$$\psi(r, \theta) \rightarrow (2/\pi kr)^{1/2} \exp[-ikr + i\omega t - i3\pi/4] T_1(\theta) \quad (6)$$

where

$$T_1(\theta) = \sum_{N=-\infty}^{\infty} B(N) \exp(iN\theta) = B(0) + 2 \sum_{N=1}^{\infty} B(N) \cos N\theta \quad (7)$$

The quantity  $T_1(\theta)$  has a meaning quite similar to the more familiar amplitude function  $S(\theta)$  in the case of finite particles.

10. Referring to the definitions reveals that  $E_z$  is everywhere proportional to  $\Psi$ . Thus, the intensity is proportional to  $|\Psi|^2$ . Then if  $I_0$  is the intensity of the incident radiation and  $I$  the intensity of the radiation scattered in the direction  $\theta$  at a large distance from the cylinder axis we have

$$I = (z/\pi rk) |\bar{T}_1(\theta)|^2 I_0 \quad (8)$$

The extinction efficiency factor per unit length, which is just the scattering efficiency factor since we assumed no conductivity, is given by

$$Q_1 = (z/\chi) \{ \text{Re } \bar{T}_1(0) \} \quad (9)$$

Substituting from equation (6) into equation (9) we find

$$Q_1 = (z/\chi) \left\{ \text{Re } B(0) + z \sum_{N=1}^{\infty} \text{Re } B(N) \right\} \quad (10)$$

#### Case II: Normally Polarized Incident Radiation

11. Now the external fields ( $r > a$ ) are given by

$$\vec{E}(r, \theta) = \text{curl}(\vec{u}_z \Psi) \quad (11)$$

$$\vec{H}(r, \theta) = (1/k) \text{curl curl}(\vec{u}_z \Psi) \quad (12)$$

where the scalar function  $\Psi$  is now

$$\Psi(r, \theta) = \sum_{N=-\infty}^{\infty} \exp[iN\theta + i\omega t] (-1)^N [J_N(kr) - A(N) H_N(kr)] \quad (13)$$

and the coefficients are again easily found to be

$$A(N) = \frac{J'_N(y) J_N(x) - m J_0(y) J'_N(x)}{J'_N(y) H_N(x) - m J_N(y) H'_N(x)} \quad (14)$$

where we again see that

$$A(N) = A(-N). \quad (15)$$

The scattered wave, for  $kr \gg 1$ , is

$$\psi(r, \theta) \rightarrow (z/\pi kr)^{1/2} \exp\{-i kr + i \omega t\} - i 3\pi/4 \} T_z(\theta) \quad (16)$$

where

$$T_z(\theta) = \sum_{N=-\infty}^{\infty} A(N) \exp(i N \theta) = A(0) + z \sum_{N=1}^{\infty} A(N) \cos N \theta \quad (17)$$

Just as in the previous case  $T_z(\theta)$  has a meaning similar to the amplitude function  $S(\theta)$  for finite particles. Corresponding to equations (8) to (10) we have for case II

$$I = (z/\pi r k) |T_z(\theta)|^2 I_0 \quad (18)$$

$$Q_z = (z/\chi) \operatorname{Re}\{T_z(0)\} \quad (19)$$

and finally substituting from equation (17) into equation (19) we obtain

$$Q_z = (z/\chi) \left\{ \operatorname{Re} A(0) + z \sum_{N=1}^{\infty} \operatorname{Re} A(N) \right\} \quad (20)$$

## CHAPTER III

### SUMMARY OF THE NUMERICAL RESULTS

12. To effect the calculation of the complex scattering coefficients tabulated herein a program was constructed for the IBM 7090 computer system at the U. S. Naval Ordnance Laboratory and extensively employed. The procedure may be roughly summarized as follows. For a fixed refractive index,  $m$ , a circumference to wavelength ratio  $x$  was chosen and the complex coefficients computed for successively larger orders  $N$  until the real part of each became less than  $10^{-8}$ . The next higher value of  $x$  was chosen and the calculation repeated. This procedure was repeated until the preselected range in  $x$  was covered. After this the value of the index of refraction was changed and the whole process was repeated again.

13. Each coefficient was obtained to six significant figures in floating point. This is undoubtedly more than adequate. To minimize any loss due to oscillation of the coefficients with increasing order  $N$  the constraint of cutting off the calculation of higher orders when the real part became less than  $10^{-8}$  was found to be quite reasonable. The accompanying tables represent direct output from the IBM 7090 system. For clarification we note here that those entries consisting of only a decimal point preceded by a signed or unsigned zero are to be interpreted as having the value 0.0000000.

14. Although the full range in  $x$  of the computations was rather more extensive than those presented here it was felt that to include all of the results in this report would make its size somewhat unreasonable. Furthermore, any detailed discussion of the results has been omitted here. Careful consideration of these results will be made in a forthcoming publication.

15. The values obtained for  $m = 1.500$  and  $m = 2.00$  have been compared with those somewhat more limited ones of Larkin and Churchill<sup>15</sup> and were found to be in quite good agreement.

16. One needs merely look at the expressions in Chapter II to obtain an appreciation of the numerical values of the scattering coefficients  $A(N)$  and  $B(N)$ . With such tables at one's disposal, precise comparisons between analytic approximations and the exact solutions may be readily made. As an example, values of the scattering efficiency factor for  $m = 1.500$  have been computed from the coefficients and found to be in good agreement with results obtained from an approximate formula by Montroll and Hart<sup>14</sup> for small  $x$ . Furthermore, by interpolation between or extrapolation from the tabulated values the physical quantities defined in Chapter II anywhere in the refractive index range from about 1.400 to about 3.000 may be obtained quite easily.

REFERENCES

- (1) L. Libelo, U. S. Naval Ordnance Laboratory, NOLTR 62-157, August 1962
- (2) Lord Rayleigh, Phil. Mag., 12, 81 (1881)
- (3) W. von Ignatowsky, Ann der Physik, 18, 495 (1905)
- (4) W. Seitz, Ann der Physik, 21, 1013 (1906)
- (5) B. Larkin and S. W. Churchill, J. Opt. Soc. Am., 49, 188 (1959)
- (6) H. C. van de Hulst, "Light Scattering by Small Particles", J. Wiley & Sons, Inc., New York, 1957
- (7) L. Libelo, U. S. Naval Ordnance Laboratory, NOLTR 62-142, August, 1962
- (8) W. Farrone, M. Kerker, and E. Matijević, "Interdisciplinary Conference on Electromagnetic Scattering", Clarkson College of Technology, Potsdam, New York, August, 1962
- (9) E. Matijević, R. Ottewill and M. Kerker, J. Opt. Soc. Am., 51, 115 (1961)
- (10) L. Libelo and J. M. Greenberg, 1962, (to be published)
- (11) J. Stratton, "Electromagnetic Theory", McGraw-Hill Book Co., Inc., New York, N. Y., 1941
- (12) P. Morse and H. Feshbach, "Methods of Theoretical Physics", Part II, McGraw-Hill Book Co., Inc., New York, N. Y., 1953
- (13) J. Mentzer, "Scattering and Diffraction of Radio Waves", Permagon Press Inc., New York, N. Y., 1955
- (14) E. Montroll and R. Hart, J. Appl. Phys., 22, 1278 (1951)

Table 1

Real and Imaginary Parts of the Scattering Coefficients  
A(N) and B(N) for the Isotropic, Dielectric, Infinite  
Circular Cylinder. Refractive Index  $m = 1.400$ .  
Range of circumference to wavelength ratio,  
 $x = 2 \pi a / \lambda$ ; 0.100(0.150)13.150

NOLTR 62-161

REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
0.100	0	-0.	-0.	0.0000580	0.0076178
	1	0.	0.	0.	0.
0.250	0	0.0000001	0.0003682	0.0023869	0.0487976
	1	0.0002544	0.0159482	0.0000001	0.0003682
	2	0.0000000	0.0001235	0.	0.
0.400	0	0.0000058	0.0024165	0.0160774	0.1257730
	1	0.0016335	0.0403842	0.0000058	0.0024165
	2	0.0000006	0.0008013	0.	0.
0.550	0	0.0000752	0.0086725	0.0551971	0.2283650
	1	0.0055524	0.0743075	0.0000752	0.0086725
	2	0.0000080	0.0028229	0.0000000	0.0001067
0.700	0	0.0005256	0.0229194	0.1259190	0.3317590
	1	0.0133689	0.1148490	0.0005256	0.0229194
	2	0.0000529	0.0072717	0.0000002	0.0004489
	3	0.0000000	0.0001484	0.	0.
0.850	0	0.0025369	0.0503042	0.2144380	0.4104320
	1	0.0256933	0.1582190	0.0025369	0.0503042
	2	0.0002390	0.0154574	0.0000020	0.0014228
	3	0.0000002	0.0004650	0.	0.
1.000	0	0.0095213	0.0971113	0.2967130	0.4568090
	1	0.0420330	0.2006650	0.0095213	0.0971113
	2	0.0008311	0.0288174	0.0000139	0.0037294
	3	0.0000014	0.0012002	0.	0.
1.150	0	0.0294643	0.1691040	0.3574360	0.4792450
	1	0.0611023	0.2395180	0.0294643	0.1691040
	2	0.0023838	0.0487661	0.0000729	0.0085364
	3	0.0000072	0.0026931	0.0000001	0.0002300
1.300	0	0.0767664	0.2662200	0.3943370	0.4887080
	1	0.0816205	0.2737860	0.0767664	0.2662200
	2	0.0058810	0.0764622	0.0003121	0.0176650
	3	0.0000295	0.0054350	0.0000004	0.0006003
	4	0.0000000	0.0001945	0.	0.
1.450	0	0.1674200	0.3733500	0.4122530	0.4922400
	1	0.1031240	0.3041210	0.1674200	0.3733500
	2	0.0128151	0.1124760	0.0011460	0.0338333
	3	0.0001019	0.0100923	0.0000020	0.0014064
	4	0.0000002	0.0004500	0.	0.
1.600	0	0.3013400	0.4588400	0.4180360	0.4932360
	1	0.1264860	0.3323960	0.3013400	0.4588400
	2	0.0250900	0.1563980	0.0037281	0.0609442
	3	0.0003072	0.0175232	0.0000091	0.0030218
	4	0.0000009	0.0009521	0.	0.



NOLTR 62-161

REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
1.750	0	0.4496500	0.4974580	0.4185800	0.4933260
	1	0.1541900	0.3611310	0.4496500	0.4974580
	2	0.0446525	0.2065400	0.0109917	0.1042640
	3	0.0008290	0.0287804	0.0000366	0.0060526
	4	0.0000035	0.0018719	0.0000001	0.0002293
1.900	0	0.5757950	0.4942220	0.4205530	0.4936480
	1	0.1905530	0.3927370	0.5757950	0.4942220
	2	0.0728987	0.2599700	0.0297291	0.1698390
	3	0.0020375	0.0450924	0.0001310	0.0114459
	4	0.0000120	0.0034602	0.0000003	0.0005064
	5	0.0000000	0.0001614	0.	0.
2.050	0	0.6636500	0.4724600	0.4307560	0.4951820
	1	0.2419090	0.4282390	0.6636500	0.4724600
	2	0.1101470	0.3130720	0.0736592	0.2612160
	3	0.0046182	0.0678002	0.0004263	0.0206427
	4	0.0000369	0.0060705	0.0000011	0.0010498
	5	0.0000001	0.0003306	0.	0.
2.200	0	0.7167270	0.4505880	0.4565810	0.4981110
	1	0.3160860	0.4649470	0.7167270	0.4505880
	2	0.1555800	0.3624570	0.1638910	0.3701770
	3	0.0097410	0.0982148	0.0012831	0.0357977
	4	0.0001037	0.0101823	0.0000042	0.0020610
	5	0.0000004	0.0006397	0.	0.
2.350	0	0.7448660	0.4359360	0.5059590	0.4999640
	1	0.4193880	0.4934590	0.7448660	0.4359360
	2	0.2078350	0.4057580	0.3153310	0.4646470
	3	0.0192344	0.1373480	0.0036227	0.0600794
	4	0.0002699	0.0164273	0.0000149	0.0038626
	5	0.0000014	0.0011787	0.0000000	0.0001784
2.500	0	0.7570970	0.4288370	0.5851750	0.4926920
	1	0.5493130	0.4975620	0.7570970	0.4288370
	2	0.2659400	0.4418330	0.5068250	0.4999530
	3	0.0356733	0.1854740	0.0096998	0.0980086
	4	0.0006566	0.0256150	0.0000484	0.0069554
	5	0.0000043	0.0020800	0.0000001	0.0003614
	6	0.0000000	0.0001138	0.	0.
2.650	0	0.7604470	0.4268100	0.6922960	0.4615430
	1	0.6876150	0.4634660	0.7604470	0.4268100
	2	0.3301170	0.4702550	0.6826100	0.4654610
	3	0.0622220	0.2415580	0.0247986	0.1555110
	4	0.0015042	0.0387555	0.0001465	0.0121036
	5	0.0000125	0.0035333	0.0000005	0.0007002
	6	0.0000000	0.0002178	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.800	0	0.7606850	0.4266650	0.8089440	0.3931330
	1	0.8069510	0.3946910	0.7606850	0.4266650
	2	0.4020220	0.4903060	0.8050330	0.3961750
	3	0.1020590	0.3027260	0.0604859	0.2383850
	4	0.0032676	0.0570693	0.0004187	0.0204586
	5	0.0000337	0.0058026	0.0000017	0.0013044
	6	0.0000002	0.0004004	0.	0.
2.950	0	0.7631640	0.4251410	0.9054620	0.2925760
	1	0.8903340	0.3124730	0.7631640	0.4251410
	2	0.4842210	0.4997510	0.8760780	0.3294930
	3	0.1573890	0.3641670	0.1385490	0.3454750
	4	0.0067640	0.0819650	0.0011400	0.0337449
	5	0.0000855	0.0092465	0.0000055	0.0023471
	6	0.0000005	0.0007094	0.0000000	0.0001239
3.100	0	0.7733160	0.4186870	0.9641560	0.1859000
	1	0.9393500	0.2386860	0.7733160	0.4186870
	2	0.5786080	0.4937820	0.9133080	0.2813830
	3	0.2284140	0.4198110	0.2863940	0.4520760
	4	0.0133913	0.1149440	0.0029831	0.0545360
	5	0.0002058	0.0143430	0.0000168	0.0040955
	6	0.0000015	0.0012157	0.0000001	0.0002375
3.250	0	0.7965440	0.4025690	0.9902460	0.0982807
	1	0.9649310	0.1839530	0.7965440	0.4025690
	2	0.6835720	0.4650820	0.9314090	0.2527570
	3	0.3129620	0.4636990	0.5033580	0.4999890
	4	0.0254066	0.1573570	0.0075631	0.0866368
	5	0.0004719	0.0217189	0.0000484	0.0069571
	6	0.0000041	0.0020222	0.0000002	0.0004406
3.400	0	0.8368930	0.3694630	0.9984780	0.0389857
	1	0.9773210	0.1488790	0.8368930	0.3694630
	2	0.7908390	0.4067090	0.9391610	0.2390350
	3	0.4071530	0.4913040	0.7243290	0.4468520
	4	0.0461969	0.2099110	0.0187001	0.1354640
	5	0.0010368	0.0321828	0.0001333	0.0115438
	6	0.0000107	0.0032733	0.0000006	0.0007928
3.550	0	0.8933280	0.3086960	0.9999730	0.0051849
	1	0.9829910	0.1293050	0.8933280	0.3086960
	2	0.8856010	0.3182950	0.9415290	0.2346310
	3	0.5067010	0.4999550	0.8765430	0.3289610
	4	0.0803426	0.2718230	0.0452042	0.2077520
	5	0.0021914	0.0467614	0.0003525	0.0187724
	6	0.0000267	0.0051691	0.0000019	0.0013876
3.550	7	0.0000002	0.0004163	0.	0.

NOLTR 62-161

REFRACTIVE INDEX  $M = 1.400$

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.700	0	0.9537630	0.2099990	0.9998960	-0.0102051
	1	0.9854650	0.1196820	0.9537630	0.2099990
	2	0.9533880	0.2108070	0.9417500	0.2342160
	3	0.6078790	0.4882230	0.9530230	0.2115890
	4	0.1330930	0.3396750	0.1060260	0.3078700
	5	0.0044732	0.0667319	0.0009018	0.0300170
	6	0.0000637	0.0079818	0.0000056	0.0023688
	7	0.0000005	0.0006994	0.0000000	0.0001489
3.850	0	0.9942250	0.0757738	0.9997860	-0.0146134
	1	0.9867560	0.1143170	0.9942250	0.0757738
	2	0.9893440	0.1026780	0.9425300	0.2327380
	3	0.7074350	0.4549400	0.9840470	0.1252930
	4	0.2088280	0.4064710	0.2340780	0.4234210
	5	0.0088448	0.0936300	0.0022465	0.0473445
	6	0.0001459	0.0120763	0.0000156	0.0039542
	7	0.0000013	0.0011461	0.0000001	0.0002680
4.000	0	0.9952340	-0.0688741	0.9997770	-0.0149322
	1	0.9883050	0.1075100	0.9952340	-0.0688741
	2	0.9999080	0.0095974	0.9465200	0.2249880
	3	0.8015540	0.3988300	0.9948940	0.0712729
	4	0.3085580	0.4618980	0.4550680	0.4979770
	5	0.0169777	0.1291880	0.0054879	0.0738769
	6	0.0003218	0.0179369	0.0000419	0.0064706
	7	0.0000034	0.0018357	0.0000002	0.0004703
4.150	0	0.9620660	-0.1910370	0.9996850	-0.0177555
	1	0.9912280	0.0932495	0.9620660	-0.1910370
	2	0.9961930	-0.0615851	0.9560880	0.2048990
	3	0.8846390	0.3194570	0.9982630	0.0416393
	4	0.4277200	0.4947480	0.7185200	0.4497210
	5	0.0316632	0.1751020	0.0132367	0.1142870
	6	0.0006869	0.0262004	0.0001083	0.0104053
	7	0.0000083	0.0028789	0.0000006	0.0008067
4.300	0	0.9173980	-0.2752790	0.9991080	-0.0298548
	1	0.9957820	0.0648064	0.9173980	-0.2752790
	2	0.9873980	-0.1115500	0.9720640	0.1647900
	3	0.9492890	0.2194070	0.9992050	0.0281833
	4	0.5562800	0.4968220	0.9074910	0.2897430
	5	0.0573146	0.2324430	0.0316964	0.1751910
	6	0.0014232	0.0376981	0.0002718	0.0164844
	7	0.0000196	0.0044286	0.0000018	0.0013547
4.300	8	0.0000002	0.0003983	0.	0.

## NOLTR 62-161

REFRACTIVE INDEX  $M = 1.400$ 

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.450	0	0.8795630	-0.3254720	0.9965680	-0.0584809
	1	0.9997830	0.0147316	0.8795630	-0.3254720
	2	0.9786360	-0.1445940	0.9907990	0.0954804
	3	0.9885810	0.1062480	0.9994180	0.0241225
	4	0.6818140	0.4657720	0.9857400	0.1185620
	5	0.1003230	0.3004300	0.0753600	0.2639710
	6	0.0028710	0.0535048	0.0006658	0.0257943
	7	0.0000448	0.0066923	0.0000050	0.0022317
	8	0.0000004	0.0006454	0.0000000	0.0001594
4.600	0	0.8551430	-0.3519570	0.9875720	-0.1107850
	1	0.9959630	-0.0634075	0.8551430	-0.3519570
	2	0.9716670	-0.1659230	0.9999010	-0.0099555
	3	0.9999330	-0.0081670	0.9994340	0.0237906
	4	0.7934460	0.4048330	0.9999580	-0.0064705
	5	0.1685920	0.3743910	0.1750360	0.3799980
	6	0.0056560	0.0749932	0.0016006	0.0399756
	7	0.0000990	0.0099493	0.0000131	0.0036130
	8	0.0000011	0.0010255	0.0000001	0.0002746
4.750	0	0.8430510	-0.3637530	0.9622020	-0.1907070
	1	0.9704310	-0.1693960	0.8430510	-0.3637530
	2	0.9662360	-0.1806210	0.9782930	-0.1457250
	3	0.9873470	-0.1117740	0.9995160	0.0219863
	4	0.8839400	0.3202960	0.9929150	-0.0838764
	5	0.2690570	0.4434690	0.3758020	0.4843290
	6	0.0109085	0.1038720	0.0038010	0.0615347
	7	0.0002124	0.0145734	0.0000332	0.0057591
	8	0.0000026	0.0015998	0.0000002	0.0004637
4.900	0	0.8392100	-0.3673370	0.9059870	-0.2918470
	1	0.9086210	-0.2881470	0.8392100	-0.3673370
	2	0.9610200	-0.1935480	0.9113330	-0.2842630
	3	0.9596240	-0.1968400	0.9998220	0.0133418
	4	0.9494050	0.2191680	0.9834580	-0.1275470
	5	0.4024200	0.4903860	0.6695420	0.4703780
	6	0.0206346	0.1421580	0.0089791	0.0943317
	7	0.0004438	0.0210610	0.0000820	0.0090556
	8	0.0000060	0.0024533	0.0000006	0.0007689
5.050	0	0.8388770	-0.3676440	0.8107940	-0.3916720
	1	0.8112270	-0.3913280	0.8388770	-0.3676440
	2	0.9539840	-0.2095200	0.8116530	-0.3909890
	3	0.9261800	-0.2614780	0.9999320	-0.0082402
	4	0.9881200	0.1083450	0.9770560	-0.1497260
	5	0.5575610	0.4966760	0.9105860	0.2853400
	6	0.0383081	0.1919390	0.0212570	0.1442400
	7	0.0009050	0.0300697	0.0001981	0.0140742
	8	0.0000137	0.0037028	0.0000016	0.0012536
5.050	9	0.0000001	0.0003619	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.200	0	0.8373150	-0.3690780	0.6902890	-0.4623740
	1	0.7010480	-0.4577990	0.8373150	-0.3690780
	2	0.9421860	-0.2333920	0.7110620	-0.4532690
	3	0.8938400	-0.3080420	0.9975080	-0.0498599
	4	0.9999740	-0.0051292	0.9740660	-0.1589380
	5	0.7121170	0.4527760	0.9967910	0.0565564
	6	0.0696985	0.2546380	0.0507201	0.2194260
	7	0.0018069	0.0424698	0.0004697	0.0216686
	8	0.0000303	0.0055074	0.0000040	0.0020125
	9	0.0000003	0.0005714	0.0000000	0.0001586
5.350	0	0.8295730	-0.3760080	0.5745770	-0.4944070
	1	0.6050330	-0.4888440	0.8295730	-0.3760080
	2	0.9210520	-0.2696580	0.6326150	-0.4820930
	3	0.8659780	-0.3406760	0.9857220	-0.1186360
	4	0.9868460	-0.1139330	0.9732930	-0.1612250
	5	0.8422990	0.3644600	0.9880390	-0.1087120
	6	0.1236590	0.3291920	0.1216020	0.3268260
	7	0.0035419	0.0594083	0.0010987	0.0331279
	8	0.0000653	0.0080811	0.0000101	0.0031855
	9	0.0000008	0.0008876	0.0000001	0.0002645
5.500	0	0.8097250	-0.3925180	0.4858470	-0.4998000
	1	0.5361010	-0.4986950	0.8097250	-0.3925180
	2	0.8834330	-0.3209040	0.5817290	-0.4932750
	3	0.8431400	-0.3636690	0.9504200	-0.2170760
	4	0.9531700	-0.2112750	0.9732300	-0.1614110
	5	0.9338770	0.2484970	0.9555730	-0.2060410
	6	0.2116970	0.4085110	0.2834290	0.4506630
	7	0.0068345	0.0823881	0.0025498	0.0504309
	8	0.0001372	0.0117115	0.0000248	0.0049790
	9	0.0000018	0.0013576	0.0000002	0.0004341
	10	0.0000000	0.0001269	0.	0.
5.650	0	0.7698730	-0.4209140	0.4285800	-0.4948730
	1	0.4936630	-0.4999600	0.7698730	-0.4209140
	2	0.8197700	-0.3843790	0.5539320	-0.4970830
	3	0.8240030	-0.3808180	0.8728760	-0.3331120
	4	0.9056200	-0.2923570	0.9723460	-0.1639790
	5	0.9847100	0.1227040	0.9274930	-0.2593250
	6	0.3435360	0.4748890	0.5789060	0.4937350
	7	0.0130158	0.1133420	0.0059133	0.0766700
	8	0.0002817	0.0167830	0.0000592	0.0076966
	9	0.0000042	0.0020470	0.0000005	0.0007018
	10	0.0000000	0.0002023	0.	0.

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.800	0	0.7002000	-0.4581700	0.3970520	-0.4892870
	1	0.4714290	-0.4991830	0.7002000	-0.4581700
	2	0.7224690	-0.4477810	0.5420970	-0.4982250
	3	0.8060750	-0.3953710	0.7470840	-0.4346830
	4	0.8516720	-0.3554250	0.9688760	-0.1736540
	5	1.0000000	-0.0002662	0.9094420	-0.2869800
	6	0.5161620	0.4997390	0.8862340	0.3175260
	7	0.0245145	0.1546400	0.0138180	0.1167350
	8	0.0005672	0.0238097	0.0001389	0.0117868
	9	0.0000093	0.0030454	0.0000013	0.0011189
	10	0.0000001	0.0003178	0.	0.
5.950	0	0.5935200	-0.4911760	0.3831790	-0.4861610
	1	0.4621870	-0.4985680	0.5935200	-0.4911760
	2	0.5957700	-0.4907420	0.5392470	-0.4984570
	3	0.7860020	-0.4101250	0.5981090	-0.4902800
	4	0.7977910	-0.4016470	0.9601000	-0.1957250
	5	0.9869780	-0.1133700	0.9000780	-0.2998970
	6	0.7028180	0.4570170	0.9991990	0.0282869
	7	0.0457073	0.2088490	0.0328314	0.1781950
	8	0.0011221	0.0334795	0.0003211	0.0179165
	9	0.0000200	0.0044745	0.0000031	0.0017612
	10	0.0000002	0.0004919	0.0000000	0.0001499
6.100	0	0.4567140	-0.4981230	0.3794540	-0.4852510
	1	0.4592040	-0.4983330	0.4567140	-0.4981230
	2	0.4611800	-0.4984910	0.5389690	-0.4984790
	3	0.7595530	-0.4273550	0.4654150	-0.4988020
	4	0.7482390	-0.4340250	0.9409160	-0.2357810
	5	0.9523220	-0.2130830	0.8965450	-0.3045530
	6	0.8609190	0.3460320	0.9654260	-0.1826990
	7	0.0842404	0.2777480	0.0798301	0.2710300
	8	0.0021872	0.0467164	0.0007345	0.0270913
	9	0.0000422	0.0064985	0.0000075	0.0027398
	10	0.0000006	0.0007508	0.0000001	0.0002441
6.250	0	0.3172930	-0.4654230	0.3791860	-0.4851840
	1	0.4561580	-0.4980740	0.3172930	-0.4654230
	2	0.3450550	-0.4753860	0.5350610	-0.4987690
	3	0.7214380	-0.4482920	0.3700520	-0.4828180
	4	0.7048440	-0.4561130	0.9016730	-0.2977560
	5	0.9018110	-0.2975700	0.8959610	-0.3053110
	6	0.9601820	0.1955320	0.9019510	-0.2973800
	7	0.1524960	0.3595010	0.1966270	0.3974480
	8	0.0042120	0.0647635	0.0016719	0.0408549
	9	0.0000872	0.0093385	0.0000178	0.0042173
	10	0.0000013	0.0011311	0.0000001	0.0003919
	11	0.0000000	0.0001129	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
6.400	0	0.2060230	-0.4044470	0.3760000	-0.4843800
	1	0.4467090	-0.4971520	0.2060230	-0.4044470
	2	0.2607990	-0.4390700	0.5209970	-0.4995590
	3	0.6653740	-0.4718600	0.3109390	-0.4628780
	4	0.6674030	-0.4711440	0.8270940	-0.3781660
	5	0.8407520	-0.3659070	0.8956460	-0.3057200
	6	0.9983360	0.0407527	0.8516770	-0.3554200
	7	0.2670160	0.4424010	0.4565890	0.4981120
	8	0.0080378	0.0892928	0.0038132	0.0616335
	9	0.0001767	0.0132909	0.0000414	0.0064322
	10	0.0000028	0.0016831	0.0000004	0.0006214
	11	0.0000000	0.0001765	0.	0.
6.550	0	0.1337550	-0.3403890	0.3633690	-0.4809700
	1	0.4241370	-0.4942110	0.1337550	-0.3403890
	2	0.2068740	-0.4050650	0.4895270	-0.4998900
	3	0.5853800	-0.4926560	0.2785880	-0.4483040
	4	0.6342550	-0.4816380	0.7030290	-0.4569240
	5	0.7742390	-0.4180820	0.8929110	-0.3092260
	6	0.9905720	-0.0966412	0.8197430	-0.3844010
	7	0.4395320	0.4963300	0.8244450	0.3804410
	8	0.0152447	0.1225250	0.0087886	0.0933347
	9	0.0003518	0.0187541	0.0000948	0.0097346
	10	0.0000061	0.0024755	0.0000009	0.0009735
	11	0.0000001	0.0002723	0.	0.
6.700	0	0.0931590	-0.2906550	0.3345350	-0.4718280
	1	0.3815400	-0.4857650	0.0931590	-0.2906550
	2	0.1754480	-0.3803490	0.4331120	-0.4955060
	3	0.4797510	-0.4995900	0.2636750	-0.4406250
	4	0.6027380	-0.4893310	0.5368630	-0.4986390
	5	0.7069260	-0.4551720	0.8845730	-0.3195360
	6	0.9538350	-0.2098420	0.8022490	-0.3983030
	7	0.6539320	0.4757150	0.9985860	0.0375704
	8	0.0288150	0.1672860	0.0206884	0.1423390
	9	0.0006903	0.0262651	0.0002145	0.0146437
	10	0.0000130	0.0036018	0.0000023	0.0015085
	11	0.0000002	0.0004150	0.0000000	0.0001368
6.850	0	0.0727320	-0.2596960	0.2836160	-0.4507520
	1	0.3137440	-0.4640140	0.0727320	-0.2596960
	2	0.1586780	-0.3653760	0.3470170	-0.4760210
	3	0.3570970	-0.4791440	0.2589040	-0.4380330
	4	0.5694470	-0.4951540	0.3683120	-0.4823470
	5	0.6425280	-0.4792550	0.8660660	-0.3405820
	6	0.9001210	-0.2998390	0.7944270	-0.4041200
	7	0.8515890	0.3555070	0.9434320	-0.2310150
	8	0.0543711	0.2267490	0.0503433	0.2186520
	9	0.0013378	0.0365514	0.0004816	0.0219396
	10	0.0000269	0.0051879	0.0000053	0.0023143
	11	0.0000004	0.0006247	0.0000000	0.0002184

## NOLTR 62-161

REFRACTIVE INDEX  $M = 1.400$ 

$\lambda$	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
7.000	0	0.0638643	-0.2445110	0.2093890	-0.4068720
	1	0.2226630	-0.4160340	0.0638643	-0.2445110
	2	0.1504060	-0.3574690	0.2370720	-0.4252870
	3	0.2375580	-0.4255870	0.2584330	-0.4377730
	4	0.5303860	-0.4990760	0.2380330	-0.4258800
	5	0.5833980	-0.4929960	0.8300340	-0.3756030
	6	0.8365180	-0.3698050	0.7921740	-0.4057520
	7	0.9705440	0.1690810	0.8440210	-0.3628350
	8	0.1022880	0.3030260	0.1274970	0.3335290
	9	0.0025677	0.0506070	0.0010781	0.0328172
	10	0.0000548	0.0074034	0.0000124	0.0035187
	11	0.0000009	0.0009297	0.0000001	0.0003446
7.150	0	0.0611515	-0.2396080	0.1222080	-0.3275260
	1	0.1244750	-0.3301230	0.0611515	-0.2396080
	2	0.1457620	-0.3528670	0.1268300	-0.3327830
	3	0.1420030	-0.3490530	0.2569970	-0.4369780
	4	0.4811880	-0.4996460	0.1559050	-0.3627650
	5	0.5303980	-0.4990750	0.7648750	-0.4240770
	6	0.7671630	-0.4226390	0.7920070	-0.4058720
	7	0.9995640	-0.0208745	0.7692600	-0.4213060
	8	0.1902580	0.3925040	0.3259230	0.4687190
	9	0.0048959	0.0697994	0.0024220	0.0491543
	10	0.0001098	0.0104766	0.0000282	0.0053084
	11	0.0000019	0.0013688	0.0000003	0.0005379
	12	0.0000000	0.0001507	0.	0.
7.300	0	0.0609030	-0.2391520	0.0466032	-0.2107880
	1	0.0467222	-0.2110430	0.0609030	-0.2391520
	2	0.1404600	-0.3474640	0.0468402	-0.2112970
	3	0.0786077	-0.2691250	0.2493100	-0.4326140
	4	0.4178140	-0.4931990	0.1102640	-0.3132180
	5	0.4830590	-0.4997130	0.6562630	-0.4749550
	6	0.6948870	-0.4604550	0.7907140	-0.4067990
	7	0.9679670	-0.1760880	0.7227850	-0.4476240
	8	0.3418060	0.4743150	0.7121600	0.4527560
	9	0.0093062	0.0960187	0.0055055	0.0739945
	10	0.0002166	0.0147148	0.0000633	0.0079561
	11	0.0000040	0.0019948	0.0000007	0.0008310
	12	0.0000001	0.0002293	0.	0.
7.450	0	0.0599711	-0.2374330	0.0060394	-0.0774786
	1	0.0073026	-0.0851427	0.0599711	-0.2374330
	2	0.1304080	-0.3367520	0.0086252	-0.0924708
	3	0.0423169	-0.2013110	0.2298990	-0.4207680
	4	0.3383230	-0.4731390	0.0870137	-0.2818550
	5	0.4398850	-0.4963730	0.4991620	-0.4999990
	6	0.6221150	-0.4848590	0.7848800	-0.4109050
	7	0.9072250	-0.2901170	0.6967840	-0.4596480
	8	0.5657720	0.4956550	0.9916880	0.0907881
	9	0.0177005	0.1318610	0.0128043	0.1124290
	10	0.0004218	0.0205335	0.0001408	0.0118647
	11	0.0000083	0.0028792	0.0000016	0.0012714
	12	0.0000001	0.0003450	0.0000000	0.0001216



## NOLTR 62-161

REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
7.600	0	0.0552992	-0.2285630	0.0016808	0.0409629
	1	0.0003874	0.0196790	0.0552992	-0.2285630
	2	0.1119070	-0.3152520	0.0000001	-0.0003897
	3	0.0235047	-0.1515000	0.1938180	-0.3952880
	4	0.2460160	-0.4306880	0.0764729	-0.2657530
	5	0.3986560	-0.4896220	0.3192920	-0.4662020
	6	0.5511090	-0.4973810	0.7702560	-0.4206680
	7	0.8358530	-0.3704090	0.6841040	-0.4648720
	8	0.8099220	0.3923630	0.9300280	-0.2551000
	9	0.0338169	0.1807570	0.0309171	0.1730930
	10	0.0008128	0.0284985	0.0003112	0.0176373
	11	0.0000170	0.0041187	0.0000037	0.0019285
	12	0.0000003	0.0005135	0.0000000	0.0001911
7.750	0	0.0443220	-0.2058100	0.0163173	0.1266930
	1	0.0085958	0.0923141	0.0443220	-0.2058100
	2	0.0829044	-0.2757380	0.0035681	0.0596266
	3	0.0142588	-0.1185560	0.1393440	-0.3463060
	4	0.1521960	-0.3592110	0.0728304	-0.2598580
	5	0.3567090	-0.4790280	0.1676480	-0.3735530
	6	0.4838110	-0.4997380	0.7408100	-0.4381900
	7	0.7618530	-0.4259490	0.6794100	-0.4667030
	8	0.9683680	0.1750190	0.7893740	-0.4077530
	9	0.0650819	0.2466700	0.0788073	0.2694380
	10	0.0015539	0.0393884	0.0006866	0.0261939
	11	0.0000341	0.0058437	0.0000084	0.0029026
	12	0.0000006	0.0007567	0.0000001	0.0002973
7.900	0	0.0266243	-0.1609830	0.0334325	0.1797630
	1	0.0188014	0.1358230	0.0266243	-0.1609830
	2	0.0459199	-0.2093110	0.0087608	0.0931885
	3	0.0097401	-0.0982102	0.0737642	-0.2613870
	4	0.0737691	-0.2613950	0.0723066	-0.2589950
	5	0.3112520	-0.4630060	0.0737740	-0.2614030
	6	0.4215610	-0.4938090	0.6875680	-0.4634850
	7	0.6878660	-0.4633640	0.6786160	-0.4670080
	8	0.9965450	-0.0586755	0.6881720	-0.4632400
	9	0.1260610	0.3319180	0.2126800	0.4092030
	10	0.0029557	0.0542862	0.0015214	0.0389754
	11	0.0000677	0.0082292	0.0000188	0.0043390
	12	0.0000012	0.0011042	0.0000002	0.0004579
	13	0.0000000	0.0001267	0.	0.

REFRACTIVE INDEX  $M = 1.400$ 

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
8.050	0	0.0073299	-0.0853005	0.0453606	0.2080940
	1	0.0256530	0.1580980	0.0073299	-0.0853005
	2	0.0120288	-0.1090140	0.0119030	0.1084500
	3	0.0073270	-0.0852840	0.0185539	-0.1349430
	4	0.0236141	-0.1518440	0.0718505	-0.2582400
	5	0.2598800	-0.4385690	0.0285388	-0.1665060
	6	0.3648980	-0.4814010	0.5984580	-0.4902100
	7	0.6145120	-0.4867100	0.6782430	-0.4671500
	8	0.9401150	-0.2372740	0.6274400	-0.4834860
	9	0.2428160	0.4287850	0.5525580	0.4972300
	10	0.0056145	0.0747195	0.0034124	0.0583163
	11	0.0001325	0.0115117	0.0000416	0.0064502
	12	0.0000025	0.0015967	0.0000005	0.0006990
	13	0.0000000	0.0001905	0.	0.
8.200	0	0.0006345	0.0251810	0.0511018	0.2202050
	1	0.0287016	0.1669670	0.0006345	0.0251810
	2	0.0004361	0.0208786	0.0129227	0.1129410
	3	0.0055720	-0.0744375	0.0002682	0.0163735
	4	0.0024330	-0.0492660	0.0685149	-0.2526270
	5	0.2015480	-0.4011570	0.0103461	-0.1011880
	6	0.3135360	-0.4639300	0.4637780	-0.4986860
	7	0.5420490	-0.4982290	0.6748770	-0.4684210
	8	0.8538820	-0.3532250	0.5935240	-0.4911750
	9	0.4474410	0.4972300	0.9611510	0.1932360
	10	0.0106954	0.1028640	0.0078321	0.0881521
	11	0.0002564	0.0160113	0.0000912	0.0095482
	12	0.0000052	0.0022892	0.0000011	0.0010583
	13	0.0000001	0.0002836	0.0000000	0.0001059
8.350	0	0.0259290	0.1589230	0.0526280	0.2232900
	1	0.0295043	0.1692150	0.0259290	0.1589230
	2	0.0255803	0.1578790	0.0130019	0.1132820
	3	0.0036358	-0.0601879	0.0252416	0.1568580
	4	0.0011593	0.0340290	0.0594698	-0.2365020
	5	0.1381710	-0.3450790	0.0039171	-0.0624644
	6	0.2665170	-0.4421380	0.2939110	-0.4555520
	7	0.4710320	-0.4991600	0.6646120	-0.4721260
	8	0.7653320	-0.4237910	0.5762350	-0.4941540
	9	0.7269190	0.4455420	0.9311070	-0.2532720
	10	0.0205341	0.1418190	0.0186777	0.1353840
	11	0.0004915	0.0221648	0.0001988	0.0140980
	12	0.0000106	0.0032559	0.0000025	0.0015901
	13	0.0000002	0.0004181	0.0000000	0.0001642

## NOLTR 62-161

REFRACTIVE INDEX  $M = 1.400$ 

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
8.500	0	0.0901038	0.2863300	0.0527494	0.2235330
	1	0.0301447	0.1709850	0.0901038	0.2863300
	2	0.0811197	0.2730190	0.0135687	0.1156920
	3	0.0013466	-0.0366713	0.0732073	0.2604770
	4	0.0091213	0.0950688	0.0429116	-0.2026580
	5	0.0763390	-0.2655400	0.0018580	-0.0430642
	6	0.2224620	-0.4159000	0.1348400	-0.3415520
	7	0.4024290	-0.4903870	0.6423700	-0.4793020
	8	0.6827420	-0.4654090	0.5689190	-0.4952270
	9	0.9499340	0.2180820	0.7430830	-0.4369330
	10	0.0399501	0.1958420	0.0472669	0.2122090
	11	0.0009357	0.0305746	0.0004331	0.0208057
	12	0.0000211	0.0045966	0.0000056	0.0023728
	13	0.0000004	0.0006109	0.0000001	0.0002524
8.650	0	0.1752350	0.3801680	0.0543972	0.2268000
	1	0.0328830	0.1783300	0.1752350	0.3801680
	2	0.1450640	0.3521660	0.0162701	0.1265120
	3	0.0000061	0.0024740	0.1200660	0.3250380
	4	0.0190913	0.1368460	0.0205510	-0.1418760
	5	0.0272063	-0.1626840	0.0012881	-0.0358677
	6	0.1799020	-0.3841060	0.0363073	-0.1870540
	7	0.3374360	-0.4728350	0.6010440	-0.4896840
	8	0.6065510	-0.4885150	0.5669850	-0.4954930
	9	0.9952130	-0.0690197	0.6129310	-0.4870800
	10	0.0791349	0.2699490	0.1298890	0.3361810
	11	0.0017741	0.0420833	0.0009478	0.0307720
	12	0.0000416	0.0064460	0.0000124	0.0035199
	13	0.0000008	0.0008850	0.0000001	0.0003846
	14	0.0000000	0.0001053	0.	0.
8.800	0	0.2544170	0.4355330	0.0608521	0.2390590
	1	0.0406562	0.1974930	0.2544170	0.4355330
	2	0.1989090	0.3991800	0.0237979	0.1524190
	3	0.0040355	0.0633974	0.1538010	0.3607580
	4	0.0278298	0.1644850	0.0020420	-0.0451421
	5	0.0020561	-0.0452977	0.0012059	-0.0347049
	6	0.1377240	-0.3446100	0.0020705	-0.0454554
	7	0.2771660	-0.4475990	0.5309620	-0.4990400
	8	0.5350240	-0.4987720	0.5668480	-0.4955110
	9	0.9139240	-0.2804760	0.5386400	-0.4985050
	10	0.1595080	0.3661490	0.3792650	0.4852040
	11	0.0033624	0.0578890	0.0020994	0.0457712
	12	0.0000807	0.0089854	0.0000270	0.0051961
	13	0.0000016	0.0012713	0.0000003	0.0005814
	14	0.0000000	0.0001566	0.	0.

REFRACTIVE INDEX  $M = 1.400$ 

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
8.950	0	0.3123580	0.4634550	0.0767477	0.2661910
	1	0.0583735	0.2344480	0.3123580	0.4634550
	2	0.2357320	0.4244560	0.0416048	0.1996840
	3	0.0227659	0.1491560	0.1730110	0.3782570
	4	0.0348091	0.1832960	0.0077040	0.0874337
	5	0.0050551	0.0709196	0.0011589	-0.0340228
	6	0.0957955	-0.2943110	0.0032013	0.0564894
	7	0.2223660	-0.4158360	0.4220690	-0.4938890
	8	0.4664070	-0.4988700	0.5652340	-0.4957260
	9	0.7995390	-0.4003460	0.4979520	-0.4999960
	10	0.3207510	0.4667650	0.8728390	0.3331530
	11	0.0063974	0.0797277	0.0047548	0.0687911
	12	0.0001553	0.0124608	0.0000584	0.0076428
	13	0.0000033	0.0018123	0.0000008	0.0008723
	14	0.0000001	0.0002310	0.	0.
9.100	0	0.3473290	0.4761210	0.1096180	0.3124130
	1	0.0946103	0.2926760	0.3473290	0.4761210
	2	0.2567710	0.4368520	0.0798524	0.2710640
	3	0.0692239	0.2538350	0.1811180	0.3851160
	4	0.0409871	0.1982600	0.0581622	0.2340500
	5	0.0302289	0.1712170	0.0008026	-0.0283195
	6	0.0558294	-0.2295920	0.0146166	0.1200120
	7	0.1733010	-0.3785070	0.2749170	-0.4464730
	8	0.3996580	-0.4898280	0.5586410	-0.4965490
	9	0.6935130	-0.4610350	0.4768280	-0.4994630
	10	0.5991070	0.4900790	0.9499860	-0.2179740
	11	0.0122857	0.1101580	0.0111762	0.1051250
	12	0.0002962	0.0172079	0.0001259	0.0112183
	13	0.0000066	0.0025649	0.0000017	0.0013001
	14	0.0000001	0.0003379	0.0000000	0.0001392
9.250	0	0.3642250	0.4812120	0.1704960	0.3760680
	1	0.1613930	0.3678930	0.3642250	0.4812120
	2	0.2666190	0.4421910	0.1520870	0.3591050
	3	0.1511980	0.3582420	0.1828880	0.3865750
	4	0.0481624	0.2141090	0.1502850	0.3573510
	5	0.0661291	0.2485080	0.0001336	-0.0115568
	6	0.0222616	-0.1475330	0.0247735	0.1554340
	7	0.1298130	-0.3360980	0.1216310	-0.3268600
	8	0.3346250	-0.4718590	0.5427900	-0.4981660
	9	0.6035180	-0.4891670	0.4671760	-0.4989210
	10	0.9014090	0.2981130	0.7090560	-0.4541980
	11	0.0239750	0.1529710	0.0278742	0.1646120
	12	0.0005615	0.0236898	0.0002711	0.0164635
	13	0.0000130	0.0036056	0.0000037	0.0019259
	14	0.0000002	0.0004902	0.0000000	0.0002117

## NOLTR 62-161

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
9.400	0	0.3696500	0.4827100	0.2691530	0.4435200
	1	0.2668190	0.4422970	0.3696500	0.4827100
	2	0.2706940	0.4443180	0.2644370	0.4410330
	3	0.2590970	0.4381390	0.1831720	0.3868080
	4	0.0589134	0.2354630	0.2541060	0.4353580
	5	0.1026380	0.3034860	0.0005422	0.0232784
	6	0.0023241	-0.0481530	0.0306983	0.1724990
	7	0.0915616	-0.2884060	0.0215537	-0.1452210
	8	0.2719660	-0.4449730	0.5119860	-0.4998560
	9	0.5267210	-0.4992850	0.4639550	-0.4986990
	10	0.9978840	-0.0459512	0.5459320	-0.4978860
	11	0.0479223	0.2136020	0.0761612	0.2652560
	12	0.0010609	0.0325549	0.0005868	0.0242168
	13	0.0000254	0.0050379	0.0000081	0.0028380
	14	0.0000005	0.0007056	0.0000001	0.0003196
9.550	0	0.3701550	0.4828460	0.4009830	0.4900980
	1	0.4007740	0.4900550	0.3701550	0.4828460
	2	0.2744720	0.4462480	0.4005650	0.4900130
	3	0.3686230	0.4824310	0.1867990	0.3897500
	4	0.0770425	0.2666590	0.3409550	0.4740300
	5	0.1341540	0.3408170	0.0070678	0.0837727
	6	0.0039921	0.0630571	0.0329931	0.1786180
	7	0.0583866	-0.2344730	0.0014474	0.0380176
	8	0.2129100	-0.4093650	0.4585920	-0.4982820
	9	0.4586940	-0.4982910	0.4635640	-0.4986710
	10	0.8953630	-0.3060850	0.4587930	-0.4982990
	11	0.0988531	0.2984650	0.2342280	0.4235160
	12	0.0020046	0.0447276	0.0012848	0.0358208
	13	0.0000490	0.0070007	0.0000173	0.0041642
	14	0.0000010	0.0010079	0.0000002	0.0004790
	15	0.0000000	0.0001276	0.	0.
9.700	0	0.3720450	0.4833500	0.5395640	0.4984320
	1	0.5336090	0.4988690	0.3720450	0.4833500
	2	0.2835760	0.4507340	0.5278400	0.4992240
	3	0.4588560	0.4983040	0.1990780	0.3993070
	4	0.1083410	0.3108100	0.4003890	0.4899770
	5	0.1592060	0.3658680	0.0315632	0.1748340
	6	0.0315490	0.1747960	0.0333456	0.1795370
	7	0.0307720	-0.1726990	0.0315347	0.1747580
	8	0.1589180	-0.3656000	0.3737810	-0.4838070
	9	0.3957940	-0.4890210	0.4629500	-0.4986250
	10	0.7487430	-0.4337360	0.4127020	-0.4923200
	11	0.2102240	0.4074680	0.6999860	0.4582640
	12	0.0038036	0.0615557	0.0028729	0.0535227
	13	0.0000938	0.0096830	0.0000371	0.0060913
	14	0.0000020	0.0014298	0.0000005	0.0007133
	15	0.0000000	0.0001869	0.	0.

REFRACTIVE INDEX  $M = 1.400$ 

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
9.850	0	0.3817750	0.4858220	0.6544090	0.4755610
	1	0.6386660	0.4803870	0.3817750	0.4858220
	2	0.3042830	0.4601030	0.6235010	0.4845070
	3	0.5225200	0.4994930	0.2267030	0.4186990
	4	0.1609100	0.3674480	0.4348720	0.4957400
	5	0.1789460	0.3833070	0.0926650	0.2899620
	6	0.0817313	0.2739550	0.0336168	0.1802410
	7	0.0103579	-0.1012450	0.0729042	0.2599790
	8	0.1113550	-0.3145710	0.2536030	-0.4350730
	9	0.3356180	-0.4722060	0.4590390	-0.4983190
	10	0.6241370	-0.4843450	0.3887700	-0.4874710
	11	0.4432220	0.4967660	0.9822480	-0.1320500
	12	0.0072872	0.0850534	0.0066532	0.0812953
	13	0.0001780	0.0133419	0.0000791	0.0088946
	14	0.0000041	0.0020149	0.0000011	0.0010557
	15	0.0000001	0.0002715	0.0000000	0.0001166
10.000	0	0.4065080	0.4911810	0.7329960	0.4423950
	1	0.7084910	0.4544580	0.4065080	0.4911810
	2	0.3440610	0.4750610	0.6845770	0.4646840
	3	0.5623390	0.4960990	0.2785460	0.4482840
	4	0.2429890	0.4288880	0.4511710	0.4976100
	5	0.1959350	0.3969180	0.2029380	0.4021870
	6	0.1446330	0.3517300	0.0357435	0.1856500
	7	0.0003555	-0.0188522	0.1061840	0.3080730
	8	0.0712746	-0.2572830	0.1163270	-0.3206160
	9	0.2769990	-0.4475160	0.4482560	-0.4973150
	10	0.5274880	-0.4992440	0.3773400	-0.4847210
	11	0.8010420	0.3992160	0.6912040	-0.4619970
	12	0.0141979	0.1183060	0.0163028	0.1266370
	13	0.0003362	0.0183321	0.0001687	0.0129885
	14	0.0000080	0.0028220	0.0000024	0.0015540
	15	0.0000001	0.0003914	0.0000000	0.0001758
10.150	0	0.4543040	0.4979080	0.7795970	0.4145190
	1	0.7490170	0.4335790	0.4543040	0.4979080
	2	0.4111600	0.4920440	0.7185110	0.4497250
	3	0.5846450	0.4927830	0.3643680	0.4812530
	4	0.3559940	0.4788130	0.4563380	0.4980900
	5	0.2135440	0.4098080	0.3469230	0.4759910
	6	0.2089430	0.4065530	0.0422068	0.2010610
	7	0.0054813	0.0738329	0.1271100	0.3330970
	8	0.0394139	-0.1945780	0.0172184	-0.1300840
	9	0.2199290	-0.4141980	0.4260390	-0.4945000
	10	0.4511520	-0.4976080	0.3729690	-0.4835940
	11	0.9995940	0.0201509	0.4883250	-0.4998640
	12	0.0283961	0.1661020	0.0437350	0.2045050
	13	0.0006329	0.0251498	0.0003615	0.0190108
	14	0.0000154	0.0039302	0.0000052	0.0022768
	15	0.0000003	0.0005601	0.0000001	0.0002633

NOLTR 62-161

REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
10.300	0	0.5324830	0.4989440	0.8036850	0.3972100
	1	0.7693060	0.4212770	0.5324830	0.4989440
	2	0.5108980	0.4998810	0.7342160	0.4417500
	3	0.5960780	0.4906820	0.4874520	0.4998430
	4	0.4866720	0.4998220	0.4568120	0.4981310
	5	0.2358300	0.4245160	0.4859100	0.4998010
	6	0.2666660	0.4422160	0.0571565	0.2321420
	7	0.0308003	0.1727760	0.1376040	0.3444830
	8	0.0163785	-0.1269260	0.0072632	0.0849144
	9	0.1654190	-0.3715580	0.3863850	-0.4869210
	10	0.3875180	-0.4871830	0.3720920	-0.4833630
	11	0.8898210	-0.3131130	0.3887390	-0.4874640
	12	0.0589917	0.2356090	0.1350160	0.3417410
	13	0.0011918	0.0345019	0.0007833	0.0279759
	14	0.0000297	0.0054465	0.0000110	0.0033233
	15	0.0000006	0.0007964	0.0000001	0.0003918
	16	0.0000000	0.0001033	0.	0.
10.450	0	0.6414830	0.4795650	0.8136910	0.3893560
	1	0.7771900	0.4161320	0.6414830	0.4795650
	2	0.6369080	0.4808910	0.7391920	0.4390750
	3	0.6027890	0.4893200	0.6321240	0.4822270
	4	0.6107950	0.4875700	0.4586450	0.4982870
	5	0.2676900	0.4427550	0.5917480	0.4915100
	6	0.3144480	0.4642960	0.0883052	0.2837380
	7	0.0791918	0.2700380	0.1412310	0.3482600
	8	0.0029692	-0.0544097	0.0689491	0.2533680
	9	0.1152680	-0.3193450	0.3220510	-0.4672620
	10	0.3311190	-0.4706160	0.3719110	-0.4833150
	11	0.7051090	-0.4559940	0.3386240	-0.4732420
	12	0.1287920	0.3349700	0.4764310	0.4994440
	13	0.0022536	0.0474188	0.0017307	0.0415660
	14	0.0000565	0.0075153	0.0000234	0.0048373
	15	0.0000013	0.0011247	0.0000003	0.0005794
	16	0.0000000	0.0001502	0.	0.
10.600	0	0.7654700	0.4237050	0.8161150	0.3873910
	1	0.7789620	0.4149460	0.7654700	0.4237050
	2	0.7651770	0.4238880	0.7396620	0.4388190
	3	0.6106190	0.4876100	0.7648870	0.4240700
	4	0.7092150	0.4541240	0.4680260	0.4989770
	5	0.3149760	0.4645060	0.6601420	0.4736610
	6	0.3525250	0.4777560	0.1486550	0.3557480
	7	0.1485340	0.3556280	0.1416660	0.3487080
	8	0.0005315	0.0230475	0.1484150	0.3555110
	9	0.0717035	-0.2579960	0.2277440	-0.4193760
	10	0.2784300	-0.4482260	0.3697720	-0.4827430
	11	0.5597780	-0.4964140	0.3129630	-0.4636990
	12	0.2939840	0.4555850	0.9991200	0.0296488
	13	0.0043018	0.0654469	0.0039510	0.0627326
	14	0.0001068	0.0103339	0.0000494	0.0070313
	15	0.0000025	0.0015791	0.0000007	0.0008524
	16	0.0000000	0.0002169	0.	0.

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
10.750	0	0.8741020	0.3317350	0.8163360	0.3872100
	1	0.7801210	0.4141640	0.8741020	0.3317350
	2	0.8669550	0.3396230	0.7413120	0.4379140
	3	0.6254440	0.4840080	0.8600610	0.3469240
	4	0.7771710	0.4161440	0.4917960	0.4999330
	5	0.3838470	0.4863210	0.6990960	0.4586510
	6	0.3832100	0.4861690	0.2533840	0.4349490
	7	0.2310790	0.4215230	0.1424120	0.3494730
	8	0.0111805	0.1051450	0.2132260	0.4095860
	9	0.0369657	-0.1886780	0.1119540	-0.3153090
	10	0.2274830	-0.4192070	0.3627270	-0.4807870
	11	0.4568730	-0.4981370	0.3004210	-0.4584410
	12	0.6388230	0.4803420	0.6946540	-0.4605540
	13	0.0083475	0.0909825	0.0095060	0.0970341
	14	0.0002009	0.0141733	0.0001045	0.0102221
	15	0.0000049	0.0022045	0.0000015	0.0012479
	16	0.0000001	0.0003111	0.0000000	0.0001448
10.900	0	0.9452660	0.2274590	0.8194260	0.3846640
	1	0.7860310	0.4101050	0.9452660	0.2274590
	2	0.9308340	0.2537370	0.7498450	0.4331020
	3	0.6533040	0.4759180	0.9162080	0.2770760
	4	0.8198240	0.3843340	0.5375570	0.4985870
	5	0.4780790	0.4995190	0.7181850	0.4498840
	6	0.4098580	0.4918070	0.4043470	0.4907650
	7	0.3163060	0.4650340	0.1470680	0.3541740
	8	0.0376813	0.1904240	0.2561050	0.4364800
	9	0.0129615	-0.1131080	0.0176298	-0.1316020
	10	0.1776540	-0.3822210	0.3471360	-0.4760600
	11	0.3817330	-0.4858120	0.2951970	-0.4561310
	12	0.9802500	0.1391410	0.4406090	-0.4964600
	13	0.0166263	0.1278660	0.0249097	0.1558500
	14	0.0003770	0.0194122	0.0002219	0.0148952
	15	0.0000094	0.0030615	0.0000033	0.0018191
	16	0.0000002	0.0004432	0.0000000	0.0002154
11.050	0	0.9805720	0.1380240	0.8304860	0.3752060
	1	0.8020840	0.3984280	0.9805720	0.1380240
	2	0.9642930	0.1855580	0.7710340	0.4201670
	3	0.6997470	0.4583680	0.9453050	0.2273840
	4	0.8448520	0.3620460	0.6120480	0.4872830
	5	0.5937340	0.4911350	0.7252140	0.4464060
	6	0.4363730	0.4959350	0.5726110	0.4947000
	7	0.3951800	0.4888890	0.1599740	0.3665820
	8	0.0827167	0.2754540	0.2803240	0.4491570
	9	0.0011069	-0.0332515	0.0103868	0.1013850
	10	0.1295730	-0.3358330	0.3183110	-0.4658210
	11	0.3229130	-0.4675900	0.2938040	-0.4555030
	12	0.9021780	-0.2970740	0.3283870	-0.4696260
	13	0.0344510	0.1823850	0.0751935	0.2637030
	14	0.0007074	0.0265882	0.0004762	0.0218164
	15	0.0000179	0.0042323	0.0000070	0.0026428
	16	0.0000004	0.0006274	0.0000001	0.0003185



## NOLTR 62-161

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
11.200	0	0.9942540	0.0755860	0.8541790	0.3529260
	1	0.8329900	0.3729850	0.9942540	0.0755860
	2	0.9798410	0.1405430	0.8097110	0.3925290
	3	0.7673090	0.4225470	0.9589730	0.1983530
	4	0.8589060	0.3481190	0.7153420	0.4512520
	5	0.7152010	0.4513190	0.7263600	0.4458260
	6	0.4670520	0.4989130	0.7150580	0.4513870
	7	0.4626670	0.4986040	0.1872810	0.3901370
	8	0.1474340	0.3545380	0.2914540	0.4544320
	9	0.0024031	0.0489621	0.0988549	0.2984670
	10	0.0850433	-0.2789460	0.2704920	-0.4442140
	11	0.2731420	-0.4455730	0.2937060	-0.4554590
	12	0.6717890	-0.4695620	0.2755030	-0.4467680
	13	0.0756120	0.2643760	0.2809070	0.4494420
	14	0.0013328	0.0364837	0.0010408	0.0322441
	15	0.0000340	0.0058275	0.0000147	0.0038303
	16	0.0000008	0.0008828	0.0000002	0.0004682
	17	0.0000000	0.0001203	0.	0.
11.350	0	0.9984820	0.0389370	0.8927670	0.3094090
	1	0.8802480	0.3246710	0.9984820	0.0389370
	2	0.9864780	0.1154970	0.8665450	0.3400650
	3	0.8502850	0.3567920	0.9644910	0.1850640
	4	0.8671470	0.3394160	0.8313570	0.3744360
	5	0.8209060	0.3834310	0.7270020	0.4455000
	6	0.5065110	0.4999580	0.8113260	0.3912500
	7	0.5176990	0.4996870	0.2382810	0.4260320
	8	0.2297420	0.4206670	0.2948060	0.4559560
	9	0.0176628	0.1317220	0.2200330	0.4142690
	10	0.0468194	-0.2112520	0.1985250	-0.3988900
	11	0.2279860	-0.4195340	0.2926410	-0.4549750
	12	0.5020670	-0.4999960	0.2491190	-0.4325030
	13	0.1788970	0.3832660	0.9247630	0.2637740
	14	0.0025335	0.0502696	0.0023444	0.0483618
	15	0.0000640	0.0079980	0.0000307	0.0055448
	16	0.0000015	0.0012353	0.0000005	0.0006852
	17	0.0000000	0.0001728	0.	0.

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
11.500	0	0.9995360	0.0215286	0.9417400	0.2342340
	1	0.9371070	0.2427700	0.9995360	0.0215286
	2	0.9890010	0.1042970	0.9321300	0.2515220
	3	0.9303190	0.2546080	0.9659620	0.1813270
	4	0.8737860	0.3320910	0.9284050	0.2578160
	5	0.8970160	0.3039390	0.7324140	0.4427000
	6	0.5593350	0.4964670	0.8674200	0.3391200
	7	0.5618500	0.4961600	0.3253620	0.4685100
	8	0.3235630	0.4678360	0.2950750	0.4560770
	9	0.0477189	0.2131710	0.3218700	0.4671930
	10	0.0181834	-0.1336140	0.1052530	-0.3068790
	11	0.1849000	-0.3882160	0.2882060	-0.4529270
	12	0.3929490	-0.4884060	0.2361180	-0.4246950
	13	0.4447670	0.4969400	0.7271460	-0.4454270
	14	0.0048908	0.0697633	0.0055422	0.0742393
	15	0.0001199	0.0109509	0.0000645	0.0080289
	16	0.0000030	0.0017194	0.0000010	0.0009980
	17	0.0000001	0.0002465	0.0000000	0.0001185
11.650	0	0.9997430	0.0160195	0.9850520	0.1213460
	1	0.9845490	0.1233370	0.9997430	0.0160195
	2	0.9898020	0.1004690	0.9840300	0.1253610
	3	0.9835770	0.1270950	0.9660660	0.1810600
	4	0.8825890	0.3219090	0.9831320	0.1287760
	5	0.9436970	0.2305050	0.7481070	0.4341000
	6	0.6288880	0.4831020	0.8971000	0.3038290
	7	0.5980290	0.4902960	0.4575590	0.4981950
	8	0.4201460	0.4935820	0.2966350	0.4567740
	9	0.0934236	0.2910250	0.3909700	0.4879680
	10	0.0023296	-0.0482100	0.0199982	-0.1399940
	11	0.1427840	-0.3498520	0.2775210	-0.4477760
	12	0.3195200	-0.4662910	0.2303970	-0.4210870
	13	0.8983010	0.3022520	0.4030900	-0.4905190
	14	0.0096792	0.0979059	0.0141726	0.1182020
	15	0.0002243	0.0149749	0.0001358	0.0116525
	16	0.0000057	0.0023818	0.0000021	0.0014483
	17	0.0000001	0.0003497	0.0000000	0.0001752

## NOLTR 62-161

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
11.800	0	0.9997590	0.0155228	0.9996660	-0.0182642
	1	0.9996730	-0.0180672	0.9997590	0.0155228
	2	0.9903490	0.0977655	0.9996810	-0.0178713
	3	0.9999980	0.0014791	0.9671060	0.1783600
	4	0.8969760	0.3039910	0.9996330	0.0191581
	5	0.9692160	0.1727320	0.7795120	0.4145760
	6	0.7146770	0.4515680	0.9112490	0.2843830
	7	0.6296800	0.4828900	0.6234370	0.4845240
	8	0.5109600	0.4998800	0.3040560	0.4600070
	9	0.1552820	0.3621730	0.4321870	0.4953800
	10	0.0017402	0.0416799	0.0091734	0.0953375
	11	0.1018640	-0.3024690	0.2569480	-0.4369500
	12	0.2656560	-0.4416820	0.2285820	-0.4199190
	13	0.9350950	-0.2463570	0.2771290	-0.4475810
	14	0.0199047	0.1396730	0.0413907	0.1991920
	15	0.0004195	0.0204783	0.0002889	0.0169940
	16	0.0000108	0.0032854	0.0000044	0.0020954
	17	0.0000002	0.0004931	0.0000001	0.0002575
11.950	0	0.9998180	0.0134955	0.9755620	-0.1544060
	1	0.9770700	-0.1496810	0.9998180	0.0134955
	2	0.9918430	0.0899476	0.9784930	-0.1450670
	3	0.9901010	-0.0989998	0.9712690	0.1670490
	4	0.9193840	0.2722450	0.9966910	-0.0574303
	5	0.9822530	0.1320300	0.8301300	0.3755190
	6	0.8088450	0.3932110	0.9167090	0.2763220
	7	0.6604060	0.4735710	0.7822610	0.4127090
	8	0.5902700	0.4917840	0.3228050	0.4675490
	9	0.2327010	0.4225530	0.4537210	0.4978540
	10	0.0177854	0.1321710	0.1132720	0.3169250
	11	0.0637166	-0.2442470	0.2219940	-0.4155870
	12	0.2222710	-0.4157720	0.2283920	-0.4197960
	13	0.6521190	-0.4762980	0.2225360	-0.4159490
	14	0.0433918	0.2037380	0.1523450	0.3593550
	15	0.0007876	0.0280528	0.0006252	0.0249956
	16	0.0000204	0.0045150	0.0000091	0.0030254
	17	0.0000005	0.0006915	0.0000001	0.0003767

## NOLTR 62-161

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
12.100	0	0.9999890	0.0032739	0.9273170	-0.2596150
	1	0.9341950	-0.2479400	0.9999890	0.0032739
	2	0.9950300	0.0703219	0.9405150	-0.2365300
	3	0.9710700	-0.1676090	0.9799910	0.1400300
	4	0.9494640	0.2190470	0.9891720	-0.1034920
	5	0.9887840	0.1053100	0.8966550	0.3044090
	6	0.8956430	0.3057230	0.9178560	0.2745850
	7	0.6937910	0.4609180	0.8945820	0.3070910
	8	0.6559480	0.4750580	0.3600910	0.4800270
	9	0.3231020	0.4676610	0.4627180	0.4986080
	10	0.0506812	0.2193460	0.2750280	0.4465280
	11	0.0312662	-0.1740360	0.1682020	-0.3740450
	12	0.1842030	-0.3876500	0.2279200	-0.4194910
	13	0.4519640	-0.4976870	0.1962910	-0.3971910
	14	0.1031560	0.3041630	0.6953230	0.4602700
	15	0.0014906	0.0385796	0.0013911	0.0372719
	16	0.0000383	0.0061860	0.0000190	0.0043633
	17	0.0000009	0.0009646	0.0000003	0.0005483
	18	0.0000000	0.0001370	0.	0.
12.250	0	0.9995010	-0.0223373	0.8779880	-0.3272990
	1	0.8922840	-0.3100210	0.9995010	-0.0223373
	2	0.9990100	0.0314433	0.9052780	-0.2928300
	3	0.9541700	-0.2091170	0.9920200	0.0889743
	4	0.9809440	0.1367240	0.9835750	-0.1271040
	5	0.9922240	0.0878393	0.9621320	0.1908760
	6	0.9586470	0.1991050	0.9180450	0.2742960
	7	0.7331430	0.4423170	0.9553510	0.2065310
	8	0.7087340	0.4543460	0.4253430	0.4943950
	9	0.4214620	0.4937930	0.4648980	0.4987660
	10	0.0997357	0.2996470	0.4172110	0.4930980
	11	0.0085370	-0.0920004	0.0956057	-0.2940500
	12	0.1485310	-0.3556260	0.2252260	-0.4177310
	13	0.3362620	-0.4724300	0.1833990	-0.3869930
	14	0.2737230	0.4458690	0.7993440	-0.4004910
	15	0.0028620	0.0534213	0.0032358	0.0567916
	16	0.0000715	0.0084569	0.0000396	0.0062958
	17	0.0000018	0.0013392	0.0000006	0.0007954
	18	0.0000000	0.0001948	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
12.400	0	0.9949570	-0.0708334	0.8412410	-0.3654510
	1	0.8622580	-0.3446290	0.9949570	-0.0708334
	2	0.9988390	-0.0340539	0.8813500	-0.3233760
	3	0.9432030	-0.2314540	0.9999640	0.0059879
	4	0.9994580	0.0232713	0.9810510	-0.1363460
	5	0.9944200	0.0744894	0.9981980	0.0424157
	6	0.9914650	0.0919886	0.9204140	0.2706510
	7	0.7808760	0.4136530	0.9823040	0.1318450
	8	0.7509790	0.4324460	0.5280170	0.4992140
	9	0.5209060	0.4995630	0.4650950	0.4987800
	10	0.1636550	0.3699630	0.5145710	0.4997880
	11	0.0000000	-0.0002034	0.0224923	-0.1482780
	12	0.1138400	-0.3176170	0.2180570	-0.4129260
	13	0.2648990	-0.4412800	0.1775270	-0.3821140
	14	0.7180240	0.4499620	0.3762970	-0.4844560
	15	0.0056234	0.0747785	0.0080843	0.0895486
	16	0.0001334	0.0115474	0.0000829	0.0091042
	17	0.0000034	0.0018510	0.0000013	0.0011497
	18	0.0000001	0.0002752	0.0000000	0.0001417
12.550	0	0.9777070	-0.1476330	0.8197210	-0.3844200
	1	0.8454620	-0.3614630	0.9777070	-0.1476330
	2	0.9829620	-0.1294120	0.8689570	-0.3374470
	3	0.9375870	-0.2419050	0.9878180	-0.1096980
	4	0.9879510	-0.1091050	0.9805410	-0.1381330
	5	0.9963850	0.0600190	0.9880860	-0.1084990
	6	1.0000000	0.0003079	0.9280750	0.2583630
	7	0.8371880	0.3691940	0.9927440	0.0848720
	8	0.7856410	0.4103770	0.6678750	0.4709760
	9	0.6143750	0.4867430	0.4678810	0.4989670
	10	0.2406770	0.4274940	0.5735430	0.4945620
	11	0.0095385	0.0971983	0.0056889	0.0752102
	12	0.0800090	-0.2713070	0.2036070	-0.4026800
	13	0.2159630	-0.4114880	0.1754370	-0.3803410
	14	0.9807710	-0.1373300	0.2341080	-0.4234400
	15	0.0114531	0.1064050	0.0227945	0.1492480
	16	0.0002487	0.0157677	0.0001750	0.0132264
	17	0.0000065	0.0025482	0.0000027	0.0016572
	18	0.0000001	0.0003867	0.0000000	0.0002072

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
12.700	0	0.9332710	-0.2495520	0.8103190	-0.3920480
	1	0.8386520	-0.3678520	0.9332710	-0.2495520
	2	0.9355500	-0.2455520	0.8647080	-0.3420350
	3	0.9349590	-0.2465970	0.9378760	-0.2413800
	4	0.9415350	-0.2346210	0.9804020	-0.1386140
	5	0.9984810	0.0389410	0.9448590	-0.2282550
	6	0.9951610	-0.0693947	0.9435380	0.2308110
	7	0.8980190	0.3026230	0.9964290	0.0596532
	8	0.8157080	0.3877220	0.8189210	0.3850830
	9	0.6965230	0.4597590	0.4781630	0.4995230
	10	0.3284320	0.4696430	0.6061060	0.4886120
	11	0.0393520	0.1944310	0.1109970	0.3141290
	12	0.0482820	-0.2143620	0.1784230	-0.3826680
	13	0.1785270	-0.3829560	0.1750990	-0.3800520
	14	0.6505220	-0.4768050	0.1786350	-0.3830470
	15	0.0246596	0.1550850	0.0800835	0.2714220
	16	0.0004652	0.0215644	0.0003753	0.0193686
	17	0.0000122	0.0034957	0.0000057	0.0023843
	18	0.0000003	0.0005406	0.0000001	0.0003016
12.850	0	0.8498670	-0.3572020	0.8080890	-0.3938030
	1	0.8372050	-0.3691790	0.8498670	-0.3572020
	2	0.8499630	-0.3571070	0.8642450	-0.3425280
	3	0.9324330	-0.2510020	0.8500590	-0.3570140
	4	0.8747880	-0.3309590	0.9788810	-0.1437820
	5	0.9999710	0.0053623	0.8949010	-0.3066810
	6	0.9857980	-0.1183220	0.9667680	0.1792410
	7	0.9535770	0.2103990	0.9975920	0.0490111
	8	0.8439170	0.3629340	0.9345570	0.2473060
	9	0.7647940	0.4241270	0.5017850	0.4999970
	10	0.4236530	0.4941370	0.6218610	0.4849230
	11	0.0893089	0.2851890	0.3068150	0.4611720
	12	0.0214462	-0.1448660	0.1388680	-0.3458090
	13	0.1468610	-0.3539670	0.1749170	-0.3798960
	14	0.4100410	-0.4918410	0.1532190	-0.3601980
	15	0.0579097	0.2335730	0.4102020	0.4918700
	16	0.0008769	0.0296000	0.0008259	0.0287274
	17	0.0000229	0.0047821	0.0000117	0.0034276
	18	0.0000006	0.0007522	0.0000002	0.0004374
	19	0.0000000	0.0001084	0.	0.

## REFRACTIVE INDEX M= 1.400

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
13.000	0	0.7352680	-0.4411900	0.8078430	-0.3939960
	1	0.8363380	-0.3699680	0.7352680	-0.4411900
	2	0.7422470	-0.4373970	0.8631450	-0.3436940
	3	0.9268180	-0.2604350	0.7488540	-0.4336720
	4	0.8090080	-0.3930830	0.9737420	-0.1599020
	5	0.9978140	-0.0467007	0.8553430	-0.3517550
	6	0.9766050	-0.1511530	0.9911430	0.0936922
	7	0.9905230	0.0968890	0.9978370	0.0464557
	8	0.8725420	0.3334860	0.9898380	0.1002940
	9	0.8192670	0.3847970	0.5459440	0.4978850
	10	0.5219820	0.4995170	0.6276510	0.4834310
	11	0.1570660	0.3638630	0.4913270	0.4999250
	12	0.0038681	-0.0620735	0.0838008	-0.2770890
	13	0.1178320	-0.3224090	0.1733410	-0.3785420
	14	0.2868360	-0.4522840	0.1408880	-0.3479060
	15	0.1553230	0.3622130	0.9140050	-0.2803560
	16	0.0016748	0.0408904	0.0018931	0.0434691
	17	0.0000426	0.0065284	0.0000243	0.0049299
	18	0.0000011	0.0010419	0.0000004	0.0006320
	19	0.0000000	0.0001534	0.	0.
13.150	0	0.6178700	-0.4859080	0.8044100	-0.3966540
	1	0.8311950	-0.3745790	0.6178700	-0.4859080
	2	0.6407290	-0.4797870	0.8568240	-0.3502530
	3	0.9141270	-0.2801770	0.6617760	-0.4731050
	4	0.7574440	-0.4286290	0.9610760	-0.1934150
	5	0.9849980	-0.1215620	0.8307330	-0.3749880
	6	0.9690110	-0.1732870	0.9990760	-0.0303907
	7	0.9994350	-0.0237543	0.9978600	0.0462086
	8	0.9030440	0.2958980	0.9996880	-0.0176698
	9	0.8617560	0.3451560	0.6184820	0.4857590
	10	0.6182240	0.4858220	0.6286120	0.4831760
	11	0.2368220	0.4263640	0.6179610	0.4858860
	12	0.0010650	0.0326241	0.0239269	-0.1528220
	13	0.0898530	-0.2859710	0.1686220	-0.3744180
	14	0.2177610	-0.4127240	0.1351550	-0.3418890
	15	0.4789940	0.4995590	0.3615080	-0.4804370
	16	0.0032672	0.0570659	0.0046305	0.0678902
	17	0.0000792	0.0089020	0.0000505	0.0071056
	18	0.0000021	0.0014370	0.0000008	0.0009101
	19	0.0000000	0.0002159	0.0000000	0.0001140

Table 2

Real and Imaginary Parts of the Scattering Coefficients  
A(N) and B(N) for the Isotropic, Dielectric, Infinite  
Circular Cylinder. Refractive index  $m = 1.400$ .  
Range of Circumference to wavelength ration,  
 $x = 2\pi a/\lambda$  ; 0.100(0.150)13.150



NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
0.100	0	0.	0.	0.	0.0099576
	1	0.	0.	0.	0.
0.220	0	0.0000001	0.0002882	0.0024671	0.0496087
	1	0.0002160	0.0146956	0.0000001	0.0002882
0.340	0	0.0000027	0.0016512	0.0148026	0.1207620
	1	0.0012248	0.0349753	0.0000027	0.0016512
	2	0.0000002	0.0004989	0.	0.
0.460	0	0.0000311	0.0055756	0.0499131	0.2177650
	1	0.0040069	0.0631728	0.0000311	0.0055756
	2	0.0000027	0.0016571	0.	0.
0.580	0	0.0002034	0.0142613	0.1177370	0.3222970
	1	0.0096682	0.0978504	0.0002034	0.0142613
	2	0.0000172	0.0041427	0.0000000	0.0001920
0.700	0	0.0009471	0.0307609	0.2127480	0.4092510
	1	0.0190914	0.1368460	0.0009471	0.0307609
	2	0.0000753	0.0086761	0.0000003	0.0005904
	3	0.0000000	0.0001764	0.	0.
0.820	0	0.0035068	0.0591140	0.3137740	0.4640260
	1	0.0325950	0.1775740	0.0035068	0.0591140
	2	0.0002590	0.0160923	0.0000023	0.0015186
	3	0.0000002	0.0004480	0.	0.
0.940	0	0.0109920	0.1042650	0.4000700	0.4899120
	1	0.0498040	0.2175400	0.0109920	0.1042650
	2	0.0007461	0.0273054	0.0000118	0.0034338
	3	0.0000010	0.0009971	0.	0.
1.060	0	0.0301717	0.1710590	0.4626430	0.4986020
	1	0.0698363	0.2548710	0.0301717	0.1710590
	2	0.0018744	0.0432536	0.0000497	0.0070484
	3	0.0000040	0.0020066	0.0000000	0.0001599
1.180	0	0.0733807	0.2607600	0.5023760	0.4999940
	1	0.0917259	0.2886390	0.0733807	0.2607600
	2	0.0042184	0.0648121	0.0001803	0.0134273
	3	0.0000139	0.0037309	0.0000001	0.0003723
	4	0.0000000	0.0001094	0.	0.
1.300	0	0.1569040	0.3637100	0.5242460	0.4994120
	1	0.1148920	0.3188910	0.1569040	0.3637100
	2	0.0086611	0.0926614	0.0005822	0.0241210
	3	0.0000423	0.0065075	0.0000006	0.0007977
	4	0.0000001	0.0002317	0.	0.
1.420	0	0.2889760	0.4532870	0.5338760	0.4988510
	1	0.1394980	0.3464650	0.2889760	0.4532870
	2	0.0164252	0.1271040	0.0017126	0.0413483
	3	0.0001160	0.0107677	0.0000025	0.0015963
	4	0.0000002	0.0004572	0.	0.

REFRACTIVE INDEX  $n = 1.500$ 

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
1.540	0	0.4517430	0.4976660	0.5364390	0.4986700
	1	0.1666850	0.3726950	0.4517430	0.4976660
	2	0.0290155	0.1678500	0.0046762	0.0682229
	3	0.0002907	0.0170468	0.0000091	0.0030184
	4	0.0000007	0.0008504	0.	0.
1.660	0	0.6061730	0.4885970	0.5366270	0.4986570
	1	0.1987380	0.3990500	0.6061730	0.4885970
	2	0.0480305	0.2138310	0.0120121	0.1089400
	3	0.0006760	0.0259908	0.0000296	0.0054431
	4	0.0000023	0.0015040	0.0000000	0.0001829
1.780	0	0.7236280	0.4472030	0.5389460	0.4984810
	1	0.2392610	0.4266320	0.7236280	0.4472030
	2	0.0748469	0.2631440	0.0292619	0.1685400
	3	0.0014735	0.0383575	0.0000890	0.0094322
	4	0.0000065	0.0025471	0.0000001	0.0003605
	5	0.0000000	0.0001035	0.	0.
1.900	0	0.8003500	0.3997370	0.5480640	0.4976850
	1	0.2932980	0.4552740	0.8003500	0.3997370
	2	0.1102710	0.3132270	0.0675865	0.2510350
	3	0.0030350	0.0550068	0.0002499	0.0158074
	4	0.0000172	0.0041538	0.0000005	0.0006790
	5	0.0000000	0.0001926	0.	0.
2.020	0	0.8459670	0.3609800	0.5690810	0.4952050
	1	0.3669800	0.4819810	0.8459670	0.3609800
	2	0.1543310	0.3612660	0.1460080	0.3531150
	3	0.0059442	0.0768690	0.0006641	0.0257608
	4	0.0000430	0.0065542	0.0000015	0.0012286
	5	0.0000001	0.0003438	0.	0.
2.140	0	0.8712240	0.3349520	0.6074880	0.4883100
	1	0.4656130	0.4988160	0.8712240	0.3349520
	2	0.2063630	0.4046940	0.2856350	0.4517170
	3	0.0111221	0.1048730	0.0016853	0.0410183
	4	0.0001009	0.0100451	0.0000046	0.0021470
	5	0.0000003	0.0005914	0.	0.
2.260	0	0.8839270	0.3203120	0.6680830	0.4709010
	1	0.5887800	0.4920550	0.8839270	0.3203120
	2	0.2654050	0.4415490	0.4837280	0.4997350
	3	0.0199455	0.1398130	0.0041221	0.0640714
	4	0.0002252	0.0150036	0.0000132	0.0036390
	5	0.0000010	0.0009842	0.0000000	0.0001528
2.380	0	0.8891760	0.3139140	0.7515340	0.4321230
	1	0.7237830	0.4471250	0.8891760	0.3139140
	2	0.3307300	0.4704760	0.6897060	0.4626140
	3	0.0343456	0.1821150	0.0097924	0.0984708
	4	0.0004799	0.0219019	0.0000361	0.0060053
	5	0.0000025	0.0015903	0.0000001	0.0002773

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.500	0	0.8904670	0.3123070	0.8481830	0.3588430
	1	0.8459130	0.3610320	0.8904670	0.3123070
	2	0.4022550	0.4903530	0.8435010	0.3633280
	3	0.0568225	0.2315030	0.0227291	0.1490390
	4	0.0009821	0.0313228	0.0000938	0.0096836
	5	0.0000063	0.0025021	0.0000002	0.0004882
	6	0.0000000	0.0001360	0.	0.
2.620	0	0.8905760	0.3121700	0.9350100	0.2465090
	1	0.9328670	0.2502520	0.8905760	0.3121700
	2	0.4806070	0.4996240	0.9308210	0.2537590
	3	0.0902733	0.2865730	0.0516518	0.2213230
	4	0.0019376	0.0439757	0.0002344	0.0153075
	5	0.0000148	0.0038434	0.0000007	0.0008359
	6	0.0000001	0.0002298	0.	0.
2.740	0	0.8920990	0.3102560	0.9874660	0.1112530
	1	0.9798780	0.1404190	0.8920990	0.3102560
	2	0.5666630	0.4955360	0.9718950	0.1652720
	3	0.1375350	0.3444120	0.1141100	0.3179450
	4	0.0036993	0.0607091	0.0005665	0.0237953
	5	0.0000334	0.0057766	0.0000019	0.0013959
	6	0.0000001	0.0003780	0.	0.
2.860	0	0.8976650	0.3030890	0.9997040	-0.0172018
	1	0.9975410	0.0495288	0.8976650	0.3030890
	2	0.6603820	0.4735790	0.9889930	0.1043360
	3	0.2006300	0.4004720	0.2387250	0.4263040
	4	0.0068551	0.0825114	0.0013329	0.0364843
	5	0.0000725	0.0085135	0.0000052	0.0022796
	6	0.0000004	0.0006068	0.0000000	0.0001109
2.980	0	0.9098180	0.2864430	0.9859660	-0.1176320
	1	0.9997110	-0.0170018	0.9098180	0.2864430
	2	0.7588700	0.4277690	0.9955340	0.0666806
	3	0.2799060	0.4489530	0.4472390	0.4972080
	4	0.0123594	0.1104840	0.0030716	0.0553365
	5	0.0001519	0.0123249	0.0000133	0.0036489
	6	0.0000009	0.0009527	0.0000000	0.0001915
3.100	0	0.9303020	0.2546380	0.9641520	-0.1859120
	1	0.9961920	-0.0615909	0.9303020	0.2546380
	2	0.8543160	0.3527890	0.9978820	0.0459728
	3	0.3734690	0.4837250	0.6996240	0.4584210
	4	0.0217153	0.1457520	0.0069780	0.0832425
	5	0.0003083	0.0175566	0.0000329	0.0057376
	6	0.0000021	0.0014651	0.0000001	0.0003229

## NOLTR 62-161

## REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.220	0	0.9582370	0.2000460	0.9451170	-0.2277530
	1	0.9919640	-0.0892832	0.9582370	0.2000460
	2	0.9339270	0.2484100	0.9986630	0.0365441
	3	0.4772810	0.4994840	0.8932210	0.3088320
	4	0.0372058	0.1892660	0.0157279	0.1244210
	5	0.0006078	0.0246462	0.0000789	0.0088830
	6	0.0000049	0.0022114	0.0000003	0.0005337
	7	0.0000000	0.0001445	0.	0.
3.340	0	0.9867720	0.1142520	0.9325430	-0.2508120
	1	0.9888060	-0.1052100	0.9867720	0.1142520
	2	0.9844650	0.1236690	0.9988620	0.0337162
	3	0.5858860	0.4925680	0.9816270	0.1342950
	4	0.0621283	0.2413880	0.0353531	0.1846710
	5	0.0011672	0.0341438	0.0001842	0.0135696
	6	0.0000108	0.0032803	0.0000007	0.0008651
	7	0.0000001	0.0002310	0.	0.
3.460	0	0.9999610	-0.0062528	0.9261200	-0.2615750
	1	0.9868510	-0.1139110	0.9999610	-0.0062528
	2	0.9999800	-0.0044250	0.9988770	0.0334912
	3	0.6933020	0.4611230	0.9999930	-0.0026893
	4	0.1008970	0.3011930	0.0793078	0.2702190
	5	0.0021892	0.0467379	0.0004204	0.0204985
	6	0.0000229	0.0047887	0.0000019	0.0013777
	7	0.0000001	0.0003621	0.	0.
3.580	0	0.9770800	-0.1496480	0.9239510	-0.2650760
	1	0.9855280	-0.1194260	0.9770800	-0.1496480
	2	0.9856800	-0.1188040	0.9989650	0.0321473
	3	0.7935040	0.4047910	0.9912590	-0.0930836
	4	0.1587230	0.3654180	0.1753140	0.3802360
	5	0.0040208	0.0632826	0.0009429	0.0306927
	6	0.0000474	0.0068883	0.0000047	0.0021592
	7	0.0000003	0.0005575	0.0000000	0.0001242
3.700	0	0.9099450	-0.2862610	0.9237260	-0.2654370
	1	0.9839720	-0.1255830	0.9099450	-0.2862610
	2	0.9538240	-0.2098650	0.9993310	0.0258477
	3	0.8803610	0.3245390	0.9775690	-0.1480820
	4	0.2404270	0.4273430	0.3648510	0.4813880
	5	0.0072478	0.0848247	0.0020896	0.0456647
	6	0.0000956	0.0097759	0.0000111	0.0033354
	7	0.0000007	0.0008442	0.0000000	0.0002036
3.820	0	0.8155640	-0.3878390	0.9231110	-0.2664150
	1	0.9810670	-0.1362880	0.8155640	-0.3878390
	2	0.9165640	-0.2765400	0.9998950	0.0102576
	3	0.9474670	0.2230990	0.9666500	-0.1795490
	4	0.3480700	0.4763580	0.6494620	0.4771380
	5	0.0128469	0.1126140	0.0046022	0.0676833
	6	0.0001878	0.0137038	0.0000259	0.0050861
	7	0.0000016	0.0012585	0.0000001	0.0003283

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.940	0	0.7220800	-0.4479740	0.9196840	-0.2717820
	1	0.9751300	-0.1557300	0.7220800	-0.4479740
	2	0.8818810	-0.3227490	0.9996090	-0.0197733
	3	0.9886520	0.1059230	0.9599850	-0.1959940
	4	0.4779460	0.4995130	0.9006900	0.2990770
	5	0.0224265	0.1480660	0.0101409	0.1001900
	6	0.0003610	0.0189958	0.0000588	0.0076682
	7	0.0000034	0.0018490	0.0000003	0.0005209
	8	0.0000000	0.0001376	0.	0.
4.060	0	0.6476970	-0.4776880	0.9105000	-0.2854640
	1	0.9651830	-0.1883110	0.6476970	-0.4776880
	2	0.8533430	-0.3537630	0.9950560	-0.0701374
	3	0.9996670	-0.0182348	0.9568630	-0.2031660
	4	0.6189210	0.4856520	0.9968860	0.0557144
	5	0.0385862	0.1926070	0.0225203	0.1483680
	6	0.0006799	0.0260658	0.0001311	0.0114493
	7	0.0000072	0.0026801	0.0000007	0.0008146
	8	0.0000000	0.0002119	0.	0.
4.180	0	0.5967590	-0.4905480	0.8913060	-0.3112550
	1	0.9397910	-0.2378740	0.5967590	-0.4905480
	2	0.8314860	-0.3743220	0.9782130	-0.1459880
	3	0.9804770	-0.1383540	0.9559650	-0.2051730
	4	0.7544560	0.4304100	0.9829150	-0.1295890
	5	0.0654069	0.2472420	0.0507345	0.2194550
	6	0.0012578	0.0354437	0.0002877	0.0169599
	7	0.0000147	0.0038361	0.0000016	0.0012570
	8	0.0000001	0.0003217	0.	0.
4.300	0	0.5660990	-0.4956120	0.8554790	-0.3516170
	1	0.8959560	-0.3053180	0.5660990	-0.4956120
	2	0.8151580	-0.3881690	0.9347780	-0.2469160
	3	0.9363890	-0.2440580	0.9559000	-0.2053170
	4	0.8680360	0.3384510	0.9378600	-0.2414100
	5	0.1089650	0.3115950	0.1160170	0.3202450
	6	0.0022908	0.0478072	0.0006241	0.0249733
	7	0.0000295	0.0054269	0.0000037	0.0019159
	8	0.0000002	0.0004815	0.0000000	0.0001245
4.420	0	0.5503940	-0.4974540	0.7936050	-0.4047170
	1	0.8202760	-0.3839570	0.5503940	-0.4974540
	2	0.8023740	-0.3982080	0.8484470	-0.3585870
	3	0.8766830	-0.3288010	0.9553050	-0.2066340
	4	0.9484260	0.2211650	0.8968240	-0.3041890
	5	0.1774200	0.3820240	0.2632940	0.4404210
	6	0.0041160	0.0640238	0.0013440	0.0366355
	7	0.0000577	0.0075951	0.0000083	0.0028879
	8	0.0000005	0.0007111	0.0000000	0.0001971

REFRACTIVE INDEX M= 1.500

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.540	0	0.5443800	-0.4980270	0.6963910	-0.4598160
	1	0.7062510	-0.4554780	0.5443800	-0.4980270
	2	0.7907080	-0.4068030	0.7167310	-0.4505860
	3	0.8114180	-0.3911760	0.9527050	-0.2122680
	4	0.9914610	0.0920117	0.8678520	-0.3386520
	5	0.2795200	0.4487630	0.5441420	0.4980480
	6	0.0073124	0.0851993	0.0028897	0.0536783
	7	0.0001108	0.0105247	0.0000186	0.0043099
	8	0.0000011	0.0010372	0.0000001	0.0003077
4.660	0	0.5433250	-0.4981190	0.5640820	-0.4958770
	1	0.5642530	-0.4958540	0.5433250	-0.4981190
	2	0.7773680	-0.4160130	0.5644260	-0.4958320
	3	0.7485650	-0.4338380	0.9461590	-0.2257040
	4	0.9986240	-0.0370724	0.8501040	-0.3569690
	5	0.4196660	0.4935040	0.8691780	0.3372060
	6	0.0128728	0.1127260	0.0062451	0.0787789
	7	0.0002089	0.0144532	0.0000407	0.0063764
	8	0.0000022	0.0014952	0.0000002	0.0004746
	9	0.0000000	0.0001224	0.	0.
4.780	0	0.5428760	-0.4981580	0.4163510	-0.4929530
	1	0.4221890	-0.4939080	0.5428760	-0.4981580
	2	0.7590610	-0.4276530	0.4277470	-0.4947520
	3	0.6928190	-0.4613250	0.9325520	-0.2507960
	4	0.9747040	-0.1570230	0.8407560	-0.3659040
	5	0.5893260	0.4919560	0.9995100	0.0221416
	6	0.0224997	0.1483020	0.0136785	0.1161530
	7	0.0003877	0.0196873	0.0000877	0.0093646
	8	0.0000045	0.0021317	0.0000005	0.0007237
	9	0.0000000	0.0001839	0.	0.
4.900	0	0.5387270	-0.4984980	0.2844140	-0.4511350
	1	0.3062570	-0.4609380	0.5387270	-0.4984980
	2	0.7317130	-0.4430680	0.3265710	-0.4689590
	3	0.6459070	-0.4782380	0.9064230	-0.2912390
	4	0.9261170	-0.2615610	0.8369350	-0.3694250
	5	0.7614790	0.4261790	0.9499120	-0.2181260
	6	0.0391044	0.1938430	0.0306642	0.1724060
	7	0.0007093	0.0266237	0.0001870	0.0136727
	8	0.0000090	0.0030079	0.0000012	0.0010916
	9	0.0000001	0.0002728	0.	0.
5.020	0	0.5262470	-0.4993110	0.1880640	-0.3907630
	1	0.2252750	-0.4177630	0.5262470	-0.4993110
	2	0.6901650	-0.4624250	0.2606140	-0.4389700
	3	0.6074930	-0.4883090	0.8584690	-0.3485680
	4	0.8600340	-0.3469520	0.8361010	-0.3701840
	5	0.8997860	0.3002860	0.8617180	-0.3451960
	6	0.0676092	0.2510740	0.0710463	0.2569020
	7	0.0012817	0.0357780	0.0003954	0.0198802
	8	0.0000177	0.0042034	0.0000027	0.0016305
	9	0.0000002	0.0003999	0.0000000	0.0001164

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.140	0	0.5001470	-0.5000000	0.1273530	-0.3333680
	1	0.1743010	-0.3793680	0.5001470	-0.5000000
	2	0.6283010	-0.4832590	0.2212450	-0.4150850
	3	0.5760360	-0.4941850	0.7754230	-0.4173030
	4	0.7837980	-0.4116540	0.8359770	-0.3702970
	5	0.9796990	0.1410290	0.7908970	-0.4066680
	6	0.1160640	0.3203020	0.1701640	0.3757770
	7	0.0022924	0.0478240	0.0008327	0.0288445
	8	0.0000339	0.0058217	0.0000056	0.0024138
	9	0.0000003	0.0005799	0.0000000	0.0001794
5.260	0	0.4544960	-0.4979250	0.0925965	-0.2898660
	1	0.1445200	-0.3516160	0.4544960	-0.4979250
	2	0.5406390	-0.4983460	0.1997670	-0.3998250
	3	0.5493490	-0.4975590	0.6463280	-0.4781090
	4	0.7042470	-0.4563810	0.8343560	-0.3717610
	5	0.9996070	-0.0198217	0.7436360	-0.4366250
	6	0.1965560	0.3973930	0.4021380	0.4903290
	7	0.0040675	0.0636471	0.0017556	0.0418634
	8	0.0000639	0.0079969	0.0000126	0.0035454
	9	0.0000007	0.0008324	0.0000001	0.0002738
5.380	0	0.3839700	-0.4863510	0.0741218	-0.2619690
	1	0.1284280	-0.3345650	0.3839700	-0.4863510
	2	0.4268720	-0.4946230	0.1896540	-0.3920270
	3	0.5248730	-0.4993810	0.4790360	-0.4995600
	4	0.6269940	-0.4836040	0.8288050	-0.3766790
	5	0.9732740	-0.1612810	0.7148590	-0.4514820
	6	0.3235540	0.4678320	0.7839440	0.4115530
	7	0.0071776	0.0844159	0.0037295	0.0609560
	8	0.0001189	0.0109024	0.0000267	0.0051713
	9	0.0000014	0.0011829	0.0000002	0.0004134
5.500	10	0.0000000	0.0001044	0.	0.
	0	0.2880000	-0.4528310	0.0652667	-0.2469960
	1	0.1207120	-0.3257930	0.2880000	-0.4528310
	2	0.2982880	-0.4575060	0.1862110	-0.3892770
	3	0.4997730	-0.5000000	0.3097570	-0.4623930
	4	0.5559220	-0.4968630	0.8162270	-0.3872990
	5	0.9173000	-0.2754280	0.6989350	-0.4587210
	6	0.5039750	0.4999840	0.9984620	0.0391921
	7	0.0126298	0.1116700	0.0080506	0.0893631
	8	0.0002180	0.0147633	0.0000562	0.0074996
5.500	9	0.0000028	0.0016655	0.0000004	0.0006183
	10	0.0000000	0.0001538	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.620	0	0.1780250	-0.3825340	0.0618847	-0.2409460
	1	0.1176150	-0.3221510	0.1780250	-0.3825340
	2	0.1780780	-0.3825780	0.1857860	-0.3889340
	3	0.4709200	-0.4991540	0.1781290	-0.3826220
	4	0.4930770	-0.4999520	0.7921760	-0.4057500
	5	0.8446190	-0.3622670	0.6914160	-0.4619090
	6	0.7156720	0.4510940	0.9183720	-0.2737970
	7	0.0222230	0.1474080	0.018571	0.1324320
	8	0.0003951	0.0198726	0.0001172	0.0108278
	9	0.0000054	0.0023246	0.0000008	0.0009169
	10	0.0000000	0.0002241	0.	0.
5.740	0	0.0799891	-0.2712760	0.0612184	-0.2397300
	1	0.1161630	-0.3204200	0.0799891	-0.2712760
	2	0.0832327	-0.2836330	0.1851350	-0.3884070
	3	0.4348960	-0.4957430	0.0959752	-0.2945570
	4	0.4389260	-0.4962560	0.7499240	-0.4330570
	5	0.7637190	-0.4247970	0.6888940	-0.4629460
	6	0.8975340	0.3032600	0.7808910	-0.4136430
	7	0.0392086	0.1940910	0.0412941	0.1989700
	8	0.0007088	0.0266137	0.0002430	0.0155872
	9	0.0000103	0.0032180	0.0000018	0.0013486
	10	0.0000001	0.0003235	0.0000000	0.0001037
5.860	0	0.0193405	-0.1377190	0.0610628	-0.2394450
	1	0.1136520	-0.3173880	0.0193405	-0.1377190
	2	0.0350240	-0.1838410	0.1810330	-0.3850450
	3	0.3881760	-0.4873350	0.0517507	-0.2215230
	4	0.3927830	-0.4883690	0.6797620	-0.4665680
	5	0.6799700	-0.4664880	0.6886010	-0.4630650
	6	0.9906110	0.0964385	0.6801720	-0.4664100
	7	0.0694984	0.2543000	0.1010890	0.3014460
	8	0.0012613	0.0354928	0.0005027	0.0224144
	9	0.0000195	0.0044209	0.0000039	0.0019691
	10	0.0000002	0.0004627	0.0000000	0.0001567
5.980	0	0.0001604	-0.0126635	0.0593232	-0.2362290
	1	0.1073990	-0.3096200	0.0001604	-0.0126635
	2	0.0101480	-0.1002250	0.1701210	-0.3757390
	3	0.3278280	-0.4694220	0.0298736	-0.1702390
	4	0.3532390	-0.4779760	0.5707880	-0.4949640
	5	0.5969840	-0.4905040	0.6880570	-0.4632870
	6	0.9891160	-0.1037570	0.6169950	-0.4861200
	7	0.1236970	0.3292360	0.2609550	0.4391550
	8	0.0022313	0.0471845	0.0010425	0.0322704
	9	0.0000364	0.0060307	0.0000082	0.0028564
	10	0.0000004	0.0006557	0.0000001	0.0002348



NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
6.100	0	0.0070973	0.0839461	0.0539356	-0.2258910
	1	0.0948363	-0.2929890	0.0070973	0.0839461
	2	0.0014840	-0.0384945	0.1491350	-0.3562210
	3	0.2532420	-0.4348680	0.0195717	-0.1385230
	4	0.3184830	-0.4658880	0.4202380	-0.4935970
	5	0.5174180	-0.4996970	0.6847440	-0.4646180
	6	0.9274320	-0.2594260	0.5794610	-0.4936460
	7	0.2195360	0.4139320	0.6309130	0.4825580
	8	0.0039340	0.0625982	0.0021810	0.0466500
	9	0.0000668	0.0081740	0.0000170	0.0041203
	10	0.0000002	0.0009216	0.0000001	0.0003487
6.220	0	0.0227674	0.1491610	0.0432374	-0.2033910
	1	0.0741599	-0.2620310	0.0227674	0.1491610
	2	0.0000094	0.0030742	0.1159120	-0.3201200
	3	0.1691020	-0.3748420	0.0149996	-0.1215510
	4	0.2865020	-0.4521270	0.2505830	-0.4333490
	5	0.4432780	-0.4967720	0.6757590	-0.4680900
	6	0.8402690	-0.3663560	0.5583870	-0.4965790
	7	0.3801960	0.4854350	0.9861670	0.1167990
	8	0.0069327	0.0829738	0.0042408	0.0679651
	9	0.0001213	0.0110152	0.0000350	0.0059161
	10	0.0000016	0.0012850	0.0000003	0.0005140
	11	0.0000000	0.0001252	0.	0.
6.340	0	0.0370399	0.1888600	0.0270862	-0.1623350
	1	0.0459980	-0.2094810	0.0370399	0.1888600
	2	0.0008401	0.0289722	0.0719517	-0.2584080
	3	0.0879524	-0.2832260	0.0132669	-0.1144150
	4	0.2552130	-0.4359810	0.1090960	-0.3117600
	5	0.3759460	-0.4843660	0.6573650	-0.4745900
	6	0.7474840	-0.4344560	0.5477280	-0.4977170
	7	0.6126650	0.4271410	0.8997950	-0.3002730
	8	0.0122537	0.1100160	0.0101580	0.1002740
	9	0.0002182	0.0147689	0.0000717	0.0084652
	10	0.0000032	0.0017781	0.0000006	0.0007520
	11	0.0000000	0.0001801	0.	0.
6.460	0	0.0464440	0.2104450	0.0091518	-0.0952265
	1	0.0164699	-0.1272740	0.0464440	0.2104450
	2	0.0019429	0.0440360	0.0268101	-0.1615280
	3	0.0276454	-0.1639550	0.0128747	-0.1127340
	4	0.2225720	-0.4159730	0.0285415	-0.1665140
	5	0.3161290	-0.4649640	0.6243980	-0.4842780
	6	0.6573280	-0.4746030	0.5434060	-0.4981120
	7	0.8562380	0.3508480	0.7051900	-0.4559570
	8	0.0218101	0.1460630	0.0232435	0.1506760
	9	0.0003889	0.0197170	0.0001461	0.0120876
	10	0.0000060	0.0024430	0.0000012	0.0010927
	11	0.0000001	0.0002568	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
6.580	0	0.0510974	0.2201960	0.0000130	0.0036011
	1	0.0001343	-0.0115887	0.0510974	0.2201960
	2	0.0027873	0.0527211	0.0007736	-0.0278033
	3	0.0011518	-0.0339180	0.0128335	-0.1125560
	4	0.1867840	-0.3897380	0.0015670	-0.0395545
	5	0.2638690	-0.4407290	0.5696950	-0.4951190
	6	0.5722750	-0.4947490	0.5424260	-0.4981970
	7	0.9906460	0.0962619	0.5751310	-0.4943230
	8	0.0392661	0.1942270	0.0568655	0.2315850
	9	0.0006886	0.0262331	0.0002978	0.0172532
	10	0.0000111	0.0033344	0.0000025	0.0015780
	11	0.0000001	0.0003632	0.0000000	0.0001328
6.700	0	0.0525311	0.2230960	0.0172942	0.1303650
	1	0.0165827	0.1277020	0.0525311	0.2230960
	2	0.0035064	0.0591111	0.0158648	0.1249530
	3	0.0073683	0.0855217	0.0122638	-0.1100610
	4	0.1467300	-0.3538370	0.0027533	0.0523999
	5	0.2186400	-0.4133240	0.4844810	-0.4997590
	6	0.4926490	-0.4999460	0.5423090	-0.4982070
	7	0.9747480	-0.1568910	0.4995790	-0.5000000
	8	0.0718162	0.2581830	0.1524220	0.3594290
	9	0.0012138	0.0348180	0.0006089	0.0246690
	10	0.0000205	0.0045231	0.0000051	0.0022665
	11	0.0000003	0.0005097	0.0000000	0.0001961
6.820	0	0.0526441	0.2233220	0.0755235	0.2642340
	1	0.0752182	0.2637430	0.0526441	0.2233220
	2	0.0045309	0.0671590	0.0749176	0.2632580
	3	0.0338093	0.1807380	0.0103452	-0.1011840
	4	0.1028130	-0.3037150	0.0126833	0.1119040
	5	0.1795110	-0.3837800	0.3627390	-0.4807910
	6	0.4183040	-0.4932810	0.5467000	-0.4983410
	7	0.8743080	-0.3315020	0.4564680	-0.4981010
	8	0.1336950	0.3403250	0.4347340	0.4957220
	9	0.0021346	0.0461529	0.0012569	0.0354304
	10	0.0000372	0.0061012	0.0000105	0.0032402
	11	0.0000005	0.0007101	0.0000001	0.0002875
6.940	0	0.0533659	0.2247620	0.1692740	0.3749940
	1	0.1624350	0.3688490	0.0533659	0.2247620
	2	0.0065975	0.0809567	0.1560400	0.3628930
	3	0.0665922	0.2493140	0.0066347	-0.0811830
	4	0.0582720	-0.2342570	0.0221718	0.1472420
	5	0.1453340	-0.3524370	0.2142070	-0.4102710
	6	0.3492530	-0.4767340	0.5350460	-0.4987700
	7	0.7552460	-0.4299420	0.4324110	-0.4954110
	8	0.2515080	0.4338800	0.9281240	0.2582830
	9	0.0037571	0.0611797	0.0026387	0.0513006
	10	0.0000671	0.0081886	0.0000213	0.0046148
	11	0.0000010	0.0009823	0.0000002	0.0004187

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
7.060	0	0.0567518	0.2313680	0.2733020	0.4456550
	1	0.2522140	0.4342840	0.0567518	0.2313680
	2	0.0111325	0.1049220	0.2331030	0.4228070
	3	0.0967072	0.2955590	0.0019634	-0.0442672
	4	0.0205097	-0.1417360	0.0284086	0.1661370
	5	0.1149280	-0.3189350	0.0788196	-0.2694570
	6	0.2857890	-0.4517890	0.5222660	-0.4995040
	7	0.6453600	-0.4784040	0.4198410	-0.4935330
	8	0.4620220	0.4985560	0.9028790	-0.2961220
	9	0.0066415	0.0812246	0.0056960	0.0752565
	10	0.0001197	0.0109419	0.0000430	0.0065548
	11	0.0000018	0.0013497	0.0000004	0.0006059
	12	0.0000000	0.0001425	0.	0.
7.180	0	0.0654429	0.2473060	0.3632750	0.4809430
	1	0.3258980	0.4687090	0.0654429	0.2473060
	2	0.0210901	0.1436850	0.2922740	0.4548080
	3	0.1204580	0.3254960	0.0002630	0.0162158
	4	0.0007582	-0.0275256	0.0314456	0.1745190
	5	0.0872610	-0.2822170	0.0070074	-0.0834167
	6	0.2283680	-0.4197810	0.4983520	-0.4999970
	7	0.5502260	-0.4974710	0.4142110	-0.4925850
	8	0.7574730	0.4286110	0.6399410	-0.4800170
	9	0.0118451	0.1081880	0.0128470	0.1126140
	10	0.0002122	0.0145671	0.0000864	0.0092967
	11	0.0000034	0.0018431	0.0000008	0.0008718
	12	0.0000000	0.0002011	0.	0.
7.300	0	0.0835370	0.2766920	0.4288990	0.4949190
	1	0.3777690	0.4848290	0.0835370	0.2766920
	2	0.0422385	0.2011330	0.3314040	0.4707180
	3	0.1375860	0.3444640	0.0112731	0.1055750
	4	0.0097814	0.0984161	0.0323470	0.1769200
	5	0.0616702	-0.2405560	0.0082487	0.0904471
	6	0.1774250	-0.3820280	0.4579620	-0.4982300
	7	0.4679940	-0.4989750	0.4124840	-0.4922810
	8	0.9769660	0.1500100	0.4805990	-0.4996230
	9	0.0214341	0.1448260	0.0310295	0.1733970
	10	0.0003741	0.0193374	0.0001739	0.0131868
	11	0.0000063	0.0025020	0.0000015	0.0012478
	12	0.0000001	0.0002818	0.0000000	0.0001100

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
7.420	0	0.1177780	0.3223450	0.4709380	0.4991550
	1	0.4099600	0.4918260	0.1177780	0.3223450
	2	0.0841687	0.2776410	0.3530220	0.4781550
	3	0.1495480	0.3566280	0.0516506	0.2213210
	4	0.0505589	0.2190950	0.0324136	0.1770960
	5	0.0381667	-0.1915980	0.0495388	0.2169900
	6	0.1332140	-0.3398060	0.3944410	-0.4887300
	7	0.3955060	-0.4889590	0.4123310	-0.4922540
	8	0.9677450	-0.1766760	0.3965010	-0.4891710
	9	0.0396287	0.1950850	0.0832976	0.2763310
	10	0.0006568	0.0256199	0.0003514	0.0187434
	11	0.0000114	0.0033783	0.0000032	0.0017777
	12	0.0000001	0.0003923	0.0000000	0.0001606
7.540	0	0.1781270	0.3826190	0.4945020	0.4999700
	1	0.4272730	0.4946830	0.1781270	0.3826190
	2	0.1584270	0.3651410	0.3642990	0.4812330
	3	0.1585350	0.3652420	0.1373980	0.3442670
	4	0.1147190	0.3186830	0.0329592	0.1785300
	5	0.0178898	-0.1325510	0.0974397	0.2965560
	6	0.0957300	-0.2942210	0.3018260	-0.4590500
	7	0.3301620	-0.4702710	0.4116820	-0.4921380
	8	0.8240770	-0.3807550	0.3510490	-0.4772980
	9	0.0754581	0.2641290	0.2576460	0.4373380
	10	0.0011515	0.0339147	0.0007169	0.0267646
	11	0.0000206	0.0045387	0.0000064	0.0025227
	12	0.0000003	0.0005425	0.0000001	0.0002329
7.660	0	0.2747140	0.4463700	0.5053000	0.4999720
	1	0.4347590	0.4957250	0.2747140	0.4463700
	2	0.2701390	0.4440310	0.3675200	0.4821300
	3	0.1670690	0.3730380	0.2653300	0.4415090
	4	0.1875130	0.3903230	0.0354080	0.1848090
	5	0.0036960	-0.0606825	0.1361280	0.3429240
	6	0.0647338	-0.2460560	0.1827390	-0.3864520
	7	0.2703170	-0.4441240	0.4084030	-0.4915380
	8	0.6707070	-0.4699560	0.3261900	-0.4688180
	9	0.1488840	0.3559740	0.7703780	0.4205900
	10	0.0020216	0.0449166	0.0014866	0.0385284
	11	0.0000369	0.0060706	0.0000127	0.0035689
	12	0.0000006	0.0007456	0.0000001	0.0003359

NOLTR 62-161

REFRACTIVE INDEX  $n = 1.500$

X	N	RE A(N)	IM A(N)	RE P(N)	IM B(N)
7.780	0	0.4077340	0.4914130	0.5085090	0.4999280
	1	0.4370680	0.4960240	0.4077340	0.4914130
	2	0.4069630	0.4912680	0.3677880	0.4822030
	3	0.1779670	0.3824850	0.4062080	0.4911240
	4	0.2560570	0.4364540	0.0416845	0.1998670
	5	0.0006528	0.0255422	0.1621480	0.3685870
	6	0.0398684	-0.1956500	0.0643797	-0.2454280
	7	0.2152330	-0.4109840	0.4000270	-0.4899040
	8	0.5460540	-0.4978750	0.3130480	-0.4637340
	9	0.3019630	0.4591090	0.9332330	-0.2496180
	10	0.0035663	0.0596122	0.0031665	0.0561828
	11	0.0000654	0.0080880	0.0000254	0.0050381
	12	0.0000010	0.0010185	0.0000002	0.0004817
	13	0.0000000	0.0001113	0.	0.
7.900	0	0.5570320	0.4967370	0.5087560	0.4999230
	1	0.4385170	0.4962050	0.5570320	0.4967370
	2	0.5417100	0.4982570	0.3691910	0.4825860
	3	0.1945530	0.3958560	0.5276400	0.4992350
	4	0.3134180	0.4638830	0.0550032	0.2279860
	5	0.0157645	0.1245630	0.1771410	0.3817880
	6	0.0208365	-0.1428370	0.0016861	-0.0410272
	7	0.1649070	-0.3710970	0.3834760	-0.4862330
	8	0.4493490	-0.4974280	0.3068230	-0.4611750
	9	0.5907570	0.4916940	0.5882490	-0.4921500
	10	0.0063508	0.0794387	0.0070333	0.0835692
	11	0.0001154	0.0107411	0.0000505	0.0071051
	12	0.0000019	0.0013837	0.0000005	0.0006874
	13	0.0000000	0.0001558	0.	0.
8.020	0	0.6907630	0.4621790	0.5104210	0.4998910
	1	0.4433690	0.4967830	0.6907630	0.4621790
	2	0.6513240	0.4765510	0.3759380	0.4843640
	3	0.2210400	0.4149470	0.6157160	0.4864260
	4	0.3579520	0.4793980	0.0811769	0.2731070
	5	0.0558969	0.2297230	0.1841470	0.3876040
	6	0.0076196	-0.0869572	0.0289867	0.1677690
	7	0.1198540	-0.3247900	0.3547780	-0.4784460
	8	0.3726400	-0.4835020	0.3045760	-0.4602280
	9	0.9256670	0.2623130	0.3982240	-0.4895320
	10	0.0114843	0.1065480	0.0166871	0.1280960
	11	0.0002025	0.0142288	0.0001005	0.0100246
	12	0.0000035	0.0018700	0.0000009	0.0009765
	13	0.0000000	0.0002167	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
8.140	0	0.7889990	0.4080190	0.5180010	0.4996760
	1	0.4562010	0.4980780	0.7889990	0.4080190
	2	0.7287530	0.4446040	0.3927750	0.4883670
	3	0.2629320	0.4402260	0.6726360	0.4692510
	4	0.3910840	0.4879930	0.1301040	0.3364170
	5	0.1236800	0.3292160	0.1862890	0.3893400
	6	0.0007280	-0.0269713	0.1165280	0.3208570
	7	0.0808649	-0.2726280	0.3090000	-0.4620810
	8	0.3091080	-0.4621260	0.3042190	-0.4600760
	9	0.9750600	-0.1559440	0.3092190	-0.4621710
	10	0.0212572	0.1442410	0.0440278	0.2051570
	11	0.0003543	0.0188183	0.0002010	0.0141758
	12	0.0000063	0.0025149	0.0000019	0.0013818
	13	0.0000001	0.0002996	0.0000000	0.0001294
8.260	0	0.8515650	0.3555300	0.5364390	0.4986700
	1	0.4822290	0.4996840	0.8515650	0.3555300
	2	0.7784560	0.4152860	0.4253940	0.4944030
	3	0.3268920	0.4690780	0.7061410	0.4555280
	4	0.4155610	0.4928180	0.2151990	0.4109600
	5	0.2138560	0.4100260	0.1864650	0.3894810
	6	0.0014694	0.0383041	0.2125830	0.4091350
	7	0.0487909	-0.2154310	0.2412270	-0.4278280
	8	0.2541060	-0.4353570	0.3040030	-0.4599840
	9	0.7845700	-0.4111200	0.2642500	-0.4409330
	10	0.0407101	0.1976180	0.1379340	0.3448310
	11	0.0006191	0.0248737	0.0004058	0.0201396
	12	0.0000113	0.0033674	0.0000038	0.0019488
	13	0.0000002	0.0004118	0.0000000	0.0001861
8.380	0	0.8878600	0.3155390	0.5712400	0.4948990
	1	0.5273360	0.4992520	0.8878600	0.3155390
	2	0.8081180	0.3937810	0.4804020	0.4996160
	3	0.4187650	0.4933570	0.7236950	0.4471700
	4	0.4345540	0.4956980	0.3453930	0.4754960
	5	0.3141610	0.4641810	0.1874230	0.3902510
	6	0.0121935	0.1097490	0.2895060	0.4535330
	7	0.0243696	-0.1541940	0.1510700	-0.3581170
	8	0.2047870	-0.4035460	0.3022130	-0.4592170
	9	0.5920620	-0.4914520	0.2403910	-0.4273210
	10	0.0817865	0.2740390	0.5206710	0.4995730
	11	0.0010836	0.0329000	0.0008324	0.0288391
	12	0.0000202	0.0044907	0.0000075	0.0027413
	13	0.0000003	0.0005628	0.0000001	0.0002661

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	M	RE A(N)	IM A(N)	RE B(N)	IM B(N)
8.500	0	0.9073620	0.2899250	0.6278130	0.4833880
	1	0.5969680	0.4905070	0.9073620	0.2899250
	2	0.8245000	0.3803940	0.5636040	0.4959380
	3	0.5381710	0.4985410	0.7311390	0.4433680
	4	0.4513470	0.4976270	0.5087650	0.4999230
	5	0.4110200	0.4920190	0.1920300	0.3938960
	6	0.0363686	0.1872060	0.3423020	0.4744800
	7	0.0081548	-0.0899349	0.0549307	-0.2278450
	8	0.1596650	-0.3662950	0.2969320	-0.4569060
	9	0.4544050	-0.4979170	0.2277950	-0.4194090
	10	0.1746510	0.3796680	0.9827080	-0.1303560
	11	0.0019059	0.0436153	0.0017514	0.0418135
	12	0.0000356	0.0059681	0.0000148	0.0038498
	13	0.0000006	0.0007651	0.0000001	0.0003788
8.620	0	0.9167320	0.2762870	0.7087640	0.4543320
	1	0.6922860	0.4615480	0.9167320	0.2762870
	2	0.8326840	0.3732580	0.6745430	0.4685450
	3	0.6718220	0.4695500	0.7330150	0.4423850
	4	0.4693230	0.4990580	0.6689580	0.4705880
	5	0.4950980	0.4999760	0.2036960	0.4027450
	6	0.0781868	0.2684650	0.3748680	0.4840890
	7	0.0005547	-0.0235463	0.0006607	-0.0256949
	8	0.1183070	-0.3229710	0.2858390	-0.4518130
	9	0.3589080	-0.4796800	0.2216360	-0.4153470
	10	0.3913230	0.4880460	0.5525780	-0.4972280
	11	0.0033835	0.0580694	0.0038334	0.0617961
	12	0.0000625	0.0079086	0.0000292	0.0054031
	13	0.0000011	0.0010349	0.0000003	0.0005369
	14	0.0000000	0.0001197	0.	0.
8.740	0	0.9202590	0.2708910	0.8079900	0.3938810
	1	0.8031870	0.3975900	0.9202590	0.2708910
	2	0.8365360	0.3697890	0.7981530	0.4013790
	3	0.7952160	0.4035430	0.7331660	0.4423050
	4	0.4920760	0.4999370	0.7924180	0.4055760
	5	0.5628670	0.4960320	0.2270300	0.4189120
	6	0.1412870	0.3483180	0.3927110	0.4883530
	7	0.0019661	0.0442968	0.0433654	0.2036780
	8	0.0811155	-0.2730120	0.2660100	-0.4418700
	9	0.2894360	-0.4535010	0.2191860	-0.4136950
	10	0.7924760	0.4055340	0.3279300	-0.4694590
	11	0.0060976	0.0778489	0.0089263	0.0940565
	12	0.0001094	0.0104571	0.0000576	0.0075886
	13	0.0000019	0.0013933	0.0000006	0.0007581
	14	0.0000000	0.0001656	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
8.860	0	0.9209090	0.2698800	0.9052390	0.2928850
	1	0.9051450	0.2930140	0.9209090	0.2698800
	2	0.8393000	0.3672540	0.9050520	0.2931440
	3	0.8876880	0.3157510	0.7352330	0.4412090
	4	0.5235210	0.4994460	0.8714940	0.3346530
	5	0.6150360	0.4865870	0.2686650	0.4432660
	6	0.2265040	0.4185690	0.4007630	0.4900530
	7	0.0129632	0.1131160	0.1728280	0.3780980
	8	0.0491424	-0.2161650	0.2338500	-0.4232780
	9	0.2354470	-0.4242780	0.2186410	-0.4133240
	10	0.9939520	-0.0775359	0.2372370	-0.4253890
	11	0.0112453	0.1054460	0.0229861	0.1498590
	12	0.0001907	0.0138071	0.0001142	0.0106836
	13	0.0000035	0.0018675	0.0000011	0.0010663
	14	0.0000000	0.0002274	0.0000000	0.0001031
8.980	0	0.9211200	0.2695510	0.9732910	0.1612330
	1	0.9723580	0.1639460	0.9211200	0.2695510
	2	0.8440270	0.3628290	0.9714340	0.1665850
	3	0.9448850	0.2282040	0.7429770	0.4369920
	4	0.5678020	0.4953820	0.9166040	0.2764810
	5	0.6543680	0.4755740	0.3376830	0.4729200
	6	0.3296040	0.4700690	0.4031200	0.4905240
	7	0.0344848	0.1824710	0.3204410	0.4666460
	8	0.0238753	-0.1526610	0.1856070	-0.3887890
	9	0.1906950	-0.3928490	0.2185720	-0.4132780
	10	0.7627020	-0.4254260	0.1949580	-0.3961680
	11	0.0214664	0.1449330	0.0703661	0.2557630
	12	0.0003322	0.0182228	0.0002284	0.0151110
	13	0.0000062	0.0024931	0.0000022	0.0014960
	14	0.0000001	0.0003109	0.0000000	0.0001470
9.100	0	0.9232330	0.2662210	0.9992410	0.0275389
	1	0.9983990	0.0399786	0.9232330	0.2662210
	2	0.8537600	0.3533470	0.9973090	0.0518015
	3	0.9751470	0.1556780	0.7603960	0.4268420
	4	0.6286040	0.4831780	0.9406650	0.2362510
	5	0.6842160	0.4648270	0.4434290	0.4967890
	6	0.4410770	0.4965160	0.4032980	0.4905600
	7	0.0679428	0.2516480	0.4388780	0.4962500
	8	0.0009898	-0.0833124	0.1199550	-0.3249090
	9	0.1515860	-0.3586190	0.2176420	-0.4126420
	10	0.5223720	-0.4994990	0.1733670	-0.3785640
	11	0.0431279	0.2031450	0.2883040	0.4529730
	12	0.0005797	0.0240692	0.0004641	0.0215372
	13	0.0000110	0.0033164	0.0000044	0.0020943
	14	0.0000002	0.0004229	0.0000000	0.0002089



# NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
9.220	0	0.9295800	0.2558530	0.9931770	-0.0823200
	1	0.9966290	-0.0579635	0.9295800	0.2558530
	2	0.8713860	0.3347730	0.9987820	-0.0348765
	3	0.9893500	0.1026490	0.7913870	0.4063170
	4	0.7072000	0.4550480	0.9527780	0.2121130
	5	0.7078680	0.4547420	0.5866170	0.4924400
	6	0.5491760	0.4975760	0.4045780	0.4908100
	7	0.1151510	0.3192040	0.5195650	0.4996170
	8	0.0000904	-0.0095095	0.0462276	-0.2099780
	9	0.1162090	-0.3204750	0.2144000	-0.4104060
	10	0.3728730	-0.4235690	0.1620820	-0.3685260
	11	0.0933845	0.2909710	0.9893210	0.1027880
	12	0.0010163	0.0318641	0.0009659	0.0310639
	13	0.0000193	0.0043978	0.0000086	0.0029281
	14	0.0000003	0.0005726	0.0000001	0.0002955
9.340	0	0.9421290	0.2334990	0.9736230	-0.1596620
	1	0.9840250	-0.1253780	0.9421290	0.2334990
	2	0.8988710	0.3014990	0.9913760	-0.0924645
	3	0.9954490	0.0673076	0.8383530	0.3681260
	4	0.7982500	0.4008600	0.9582620	0.1999910
	5	0.7283790	0.4447950	0.7454660	0.4355990
	6	0.6443710	0.4787030	0.4103740	0.4919020
	7	0.1779360	0.3824590	0.5699370	0.4950850
	8	0.0044958	0.0669000	0.0005838	-0.0241542
	9	0.0838377	-0.2771440	0.2071320	-0.4052510
	10	0.2508550	-0.4494170	0.1564710	-0.3633020
	11	0.2235170	0.4166020	0.5361700	-0.4986900
	12	0.0017978	0.0423618	0.0020861	0.0456267
	13	0.0000338	0.0058167	0.0000167	0.0040924
	14	0.0000006	0.0007717	0.0000002	0.0004163
9.460	0	0.9613670	0.1927190	0.9544900	-0.2084190
	1	0.9712160	-0.1671990	0.9613670	0.1927190
	2	0.9353520	0.2459040	0.9836450	-0.1268370
	3	0.9979220	0.0455364	0.8987350	0.3016790
	4	0.8896360	0.3133430	0.9601540	0.1955980
	5	0.7485980	0.4336190	0.8789290	0.3262100
	6	0.7220640	0.4480110	0.4246330	0.4942870
	7	0.2572990	0.4371460	0.5991600	0.4900690
	8	0.0211239	0.1437970	0.0463379	0.2102160
	9	0.0547055	-0.2274040	0.1937180	-0.3952100
	10	0.2195990	-0.4139750	0.1541000	-0.3610450
	11	0.5668010	0.4955170	0.2687670	-0.4433180
	12	0.0032256	0.0567027	0.0047727	0.0689196
	13	0.0000589	0.0076780	0.0000328	0.0057250
	14	0.0000011	0.0010353	0.0000003	0.0005843
	15	0.0000000	0.0001255	0.	0.

## NOLTR 62-161

## REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
9.580	0	0.9839360	0.1257210	0.9406860	-0.2362120
	1	0.9622860	-0.1905040	0.9839360	0.1257210
	2	0.9738010	0.1597280	0.9785710	-0.1448100
	3	0.9989190	0.0328648	0.9596680	0.1967360
	4	0.9596670	0.1967390	0.9604230	0.1949640
	5	0.7712270	0.4200420	0.9596660	0.1967420
	6	0.7819680	0.4129090	0.4522900	0.4977190
	7	0.3521950	0.4776540	0.6144180	0.4867320
	8	0.0504983	0.2189710	0.2047810	0.4035410
	9	0.0298895	-0.1702830	0.1715780	-0.3770130
	10	0.1749690	-0.3799410	0.1534560	-0.3604270
	11	0.9928270	0.0843915	0.1791130	-0.3834470
	12	0.0059156	0.0766849	0.0119862	0.1088240
	13	0.0001025	0.0101229	0.0000645	0.0080294
	14	0.0000019	0.0013837	0.0000007	0.0008181
	15	0.0000000	0.0001718	0.	0.
9.700	0	0.9993130	0.0262039	0.9330310	-0.2499680
	1	0.9575780	-0.2015490	0.9993130	0.0262039
	2	0.9984020	0.0399370	0.9762620	-0.1522310
	3	0.9993720	0.0250596	0.9969960	0.0547291
	4	0.9951510	0.0694665	0.9606690	0.1943820
	5	0.7987600	0.4009270	0.9931390	0.0825489
	6	0.8268350	0.3783900	0.4995860	0.5000000
	7	0.4583940	0.4982660	0.6209230	0.4851570
	8	0.0928420	0.2902110	0.4023900	0.4903800
	9	0.0112131	-0.1052970	0.1379650	-0.3448640
	10	0.1396020	-0.3465740	0.1534110	-0.3603830
	11	0.7662060	-0.4232430	0.1410540	-0.3480770
	12	0.0112124	0.1052930	0.0354052	0.1848020
	13	0.0001780	0.0133420	0.0001280	0.0113132
	14	0.0000034	0.0018427	0.0000013	0.0011426
	15	0.0000001	0.0002338	0.0000000	0.0001152
9.820	0	0.9893140	-0.1028190	0.9300240	-0.2551070
	1	0.9558670	-0.2053910	0.9893140	-0.1028190
	2	0.9895340	-0.1017690	0.9757170	-0.1539270
	3	0.9996720	0.0181126	0.9897560	-0.1006940
	4	0.9978460	-0.0463616	0.9624410	0.1901270
	5	0.8331510	0.3728410	0.9999980	-0.0013478
	6	0.8600700	0.3469150	0.5734590	0.4945740
	7	0.5683850	0.4953010	0.6226040	0.4847350
	8	0.1481750	0.3552730	0.5627210	0.4960510
	9	0.0010723	-0.0327285	0.0914928	-0.2883090
	10	0.1095630	-0.3123440	0.1529460	-0.3599360
	11	0.4631580	-0.4986410	0.1224640	-0.3278210
	12	0.0223368	0.1477760	0.1425820	0.3496460
	13	0.0003098	0.0175987	0.0002579	0.0160584
	14	0.0000060	0.0024458	0.0000025	0.0015928
	15	0.0000001	0.0003167	0.0000000	0.0001626

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
9.940	0	0.9381910	-0.2408090	0.9295090	-0.2559720
	1	0.9554610	-0.2062890	0.9381910	-0.2408090
	2	0.9397110	-0.2380210	0.9756510	-0.1541320
	3	0.9999360	0.0080182	0.9411600	-0.2353260
	4	0.9806560	-0.1377320	0.9672230	0.1780540
	5	0.8749690	0.3307540	0.9968370	-0.0561472
	6	0.8850050	0.3190160	0.6778570	0.4672970
	7	0.6730130	0.4691120	0.6227300	0.4847030
	8	0.2163110	0.4117290	0.6686260	0.4707070
	9	0.0021329	0.0461343	0.0373837	-0.1897000
	10	0.0827919	-0.2755670	0.1509930	-0.3580420
	11	0.3022560	-0.4592350	0.1129040	-0.3164750
	12	0.0480347	0.2138400	0.8128740	0.3900120
	13	0.0005415	0.0232648	0.0005318	0.0230546
	14	0.0000105	0.0032370	0.0000049	0.0022183
	15	0.0000002	0.0004271	0.0000001	0.0002287
10.060	0	0.8501520	-0.3569220	0.9292530	-0.2564020
	1	0.9545970	-0.2081870	0.8501520	-0.3569220
	2	0.8634730	-0.3433470	0.9747380	-0.1569210
	3	0.9999100	-0.0094925	0.8752700	-0.3304130
	4	0.9569430	-0.2029860	0.9759920	0.1530740
	5	0.9218090	0.2684730	0.9920890	-0.0885937
	6	0.9044560	0.2939650	0.8042050	0.3968120
	7	0.7643050	0.4244320	0.6243660	0.4842860
	8	0.2966680	0.4567890	0.7326800	0.4425610
	9	0.0166947	0.1288770	0.0007349	-0.0270988
	10	0.0584300	-0.2345550	0.1463100	-0.3534170
	11	0.2155330	-0.4111910	0.1081160	-0.3105260
	12	0.1163090	0.3205950	0.5449500	-0.4979750
	13	0.0009545	0.0308802	0.0011352	0.0336740
	14	0.0000183	0.0042742	0.0000095	0.0030894
	15	0.0000003	0.0005738	0.0000001	0.0003206
10.180	0	0.7499590	-0.4330360	0.9269830	-0.2601640
	1	0.9513770	-0.2150780	0.7499590	-0.4330360
	2	0.7849020	-0.4108900	0.9714460	-0.1665500
	3	0.9984650	-0.0391432	0.8146650	-0.3885690
	4	0.9349350	-0.2466400	0.9880390	0.1087110
	5	0.9662760	0.1805170	0.9887370	-0.1055300
	6	0.9206820	0.2702340	0.9215230	0.2689200
	7	0.8377820	0.3686510	0.6307330	0.4826060
	8	0.3878630	0.4872630	0.7696820	0.4210370
	9	0.0471962	0.2120580	0.0407338	0.1976730
	10	0.0365559	-0.1876690	0.1373840	-0.3442530
	11	0.1628970	-0.3692720	0.1060100	-0.3078510
	12	0.3313470	0.4706980	0.2194030	-0.4138420
	13	0.0017049	0.0412557	0.0025568	0.0504997
	14	0.0000317	0.0056340	0.0000186	0.0043074
	15	0.0000006	0.0007678	0.0000002	0.0004481

## REFRACTIVE INDEX M= 1.500

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
10.300	0	0.6622020	-0.4729590	0.9200740	-0.2711790
	1	0.9433530	-0.2311670	0.6622020	-0.4729590
	2	0.7203700	-0.4488170	0.9634740	-0.1875950
	3	0.9925600	-0.0859332	0.7695720	-0.4211070
	4	0.9178510	-0.2745910	0.9985930	0.0374880
	5	0.9955450	0.0665969	0.9871670	-0.1125550
	6	0.9354450	0.2457400	0.9896060	0.1014180
	7	0.8929240	0.3092090	0.6455070	0.4783590
	8	0.4871750	0.4998350	0.7899380	0.4073520
	9	0.0937993	0.2915490	0.2096890	0.4070870
	10	0.0181312	-0.1334260	0.1223960	-0.3277420
	11	0.1269610	-0.3329300	0.1053640	-0.3070210
	12	0.8853920	0.3185490	0.1330280	-0.3396050
	13	0.0031082	0.0556642	0.0062750	0.0789658
	14	0.0000550	0.0074180	0.0000363	0.0060211
	15	0.0000010	0.0010235	0.0000004	0.0006245
	16	0.0000000	0.0001292	0.	0.
10.420	0	0.5977230	-0.4903570	0.9048520	-0.2934190
	1	0.9266770	-0.2606670	0.5977230	-0.4903570
	2	0.6748400	-0.4684350	0.9466940	-0.2246420
	3	0.9757300	-0.1538870	0.7408800	-0.4381520
	4	0.9058400	-0.2920510	0.9956480	-0.0658261
	5	0.9959760	-0.0633082	0.9867850	-0.1141960
	6	0.9500210	0.2179020	0.9963090	-0.0606436
	7	0.9320280	0.2516970	0.6729990	0.4691180
	8	0.5901670	0.4918030	0.7999240	0.4000570
	9	0.1561920	0.3630370	0.4511730	0.4976100
	10	0.0050234	-0.0706974	0.0993921	-0.2991880
	11	0.0997503	-0.2996670	0.1053050	-0.3069450
	12	0.8051470	-0.3960870	0.1000850	-0.3001130
	13	0.0058432	0.0762173	0.0178679	0.1324710
	14	0.0000954	0.0097649	0.0000715	0.0084553
	15	0.0000018	0.0013600	0.0000008	0.0008688
	16	0.0000000	0.0001751	0.	0.
10.540	0	0.5562370	-0.4968270	0.8755680	-0.3300740
	1	0.8949160	-0.3066610	0.5562370	-0.4968270
	2	0.6465060	-0.4780540	0.9137200	-0.2807770
	3	0.9371970	-0.2426080	0.7254500	-0.4462870
	4	0.8975730	-0.3032090	0.9600500	-0.1958410
	5	0.9625310	-0.1899090	0.9867430	-0.1143730
	6	0.9650670	0.1836090	0.9647420	-0.1844310
	7	0.9585850	0.1992480	0.7179130	0.4500160
	8	0.6908280	0.4621520	0.8038170	0.3971090
	9	0.2326530	0.4225230	0.6537650	0.4757690
	10	0.0000009	0.0009476	0.0672220	-0.2504060
	11	0.0773180	-0.2670950	0.1050800	-0.3066560
	12	0.4150840	-0.4927370	0.0847691	-0.2785380
	13	0.0115092	0.1066620	0.0681032	0.2519230
	14	0.0001655	0.0128646	0.0001430	0.0119595
	15	0.0000032	0.0018016	0.0000015	0.0012070
	16	0.0000001	0.0002365	0.0000000	0.0001258

## REFRACTIVE INDEX M= 1.500

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE P(N)	IM B(N)
10.660	0	0.5329330	-0.4989140	0.8235320	-0.3812180
	1	0.8383460	-0.3681330	0.5329330	-0.4989140
	2	0.6311510	-0.4824930	0.8533640	-0.3537430
	3	0.8649020	-0.3418290	0.7191120	-0.4494330
	4	0.8910970	-0.3115180	0.8771940	-0.3282150
	5	0.9038900	-0.2947420	0.9861550	-0.1168450
	6	0.9802330	0.1391980	0.9235690	-0.2656860
	7	0.9760600	0.1528620	0.7837150	0.4117110
	8	0.7825400	0.4125180	0.8046060	0.3965030
	9	0.3205120	0.4666730	0.7812890	0.4133720
	10	0.0065686	0.0807804	0.0288414	-0.1673610
	11	0.0576675	-0.2331140	0.1039180	-0.3051540
	12	0.2423020	-0.4284760	0.0770501	-0.2666710
	13	0.0243756	0.1542120	0.4774590	0.4994920
	14	0.0002885	0.0169842	0.0002925	0.0171011
	15	0.0000057	0.0023805	0.0000028	0.0016753
	16	0.0000001	0.0003179	0.0000000	0.0001761
10.780	0	0.5222530	-0.4995050	0.7385220	-0.4394400
	1	0.7465200	-0.4350030	0.5222530	-0.4995050
	2	0.6242040	-0.4843280	0.7547550	-0.4302330
	3	0.7555680	-0.4297500	0.7177580	-0.4500900
	4	0.8841600	-0.3200330	0.7564010	-0.4292540
	5	0.8362920	-0.3700100	0.9839760	-0.1255690
	6	0.9934480	0.0806761	0.8886860	-0.3145210
	7	0.9872830	0.1120520	0.8676470	0.3388740
	8	0.8596440	0.3473560	0.8047690	0.3963790
	9	0.4164350	0.4929670	0.8526660	0.3544390
	10	0.0285122	0.1664310	0.0008763	-0.0295900
	11	0.0399322	-0.1958000	0.1009380	-0.3012460
	12	0.1622720	-0.3687000	0.0731814	-0.2604340
	13	0.0580910	0.2339150	0.5908160	-0.4916830
	14	0.0005069	0.0225092	0.0006182	0.0248564
	15	0.0000098	0.0031387	0.0000054	0.0023260
	16	0.0000002	0.0004258	0.0000001	0.0002457
10.900	0	0.5190880	-0.4996360	0.6161450	-0.4863230
	1	0.6177270	-0.4859430	0.5190880	-0.4996360
	2	0.6213360	-0.4850540	0.6193360	-0.4855500
	3	0.6244540	-0.4842640	0.7175250	-0.4502030
	4	0.8741750	-0.3316530	0.6292800	-0.4829980
	5	0.7734630	-0.4185910	0.9785280	-0.1449510
	6	0.9999790	0.0046334	0.8647110	-0.3420320
	7	0.9942810	0.0754097	0.9514990	0.2148230
	8	0.9188830	0.2730150	0.8066770	0.3949040
	9	0.5166300	0.4997230	0.8912550	0.3113190
	10	0.0690894	0.2536060	0.0314840	0.1746220
	11	0.0240861	-0.1533160	0.0950788	-0.2933240
	12	0.1181950	-0.3228390	0.0714363	-0.2575520
	13	0.1687760	0.3745540	0.1784030	-0.3820520
	14	0.0009017	0.0300152	0.0013736	0.0370374
	15	0.0000171	0.0041319	0.0000105	0.0032335
	16	0.0000003	0.0005684	0.0000001	0.0003420

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
11.500	0	0.4562290	-0.4980800	0.1050810	-0.3066570
	1	0.1263040	-0.3321920	0.4562290	-0.4980800
	2	0.5152260	-0.4997680	0.1481230	-0.3552220
	3	0.2521290	-0.4342350	0.5797860	-0.4935930
	4	0.6225620	-0.4847460	0.3596990	-0.4799120
	5	0.6221340	-0.4848540	0.6722010	-0.4694110
	6	0.7039820	-0.4564990	0.8413190	-0.3653790
	7	0.9846440	-0.1229630	0.7294030	-0.4442680
	8	0.9965460	-0.0586678	0.9313160	0.2529160
	9	0.9312910	0.2529580	0.9288930	0.2570040
	10	0.5240790	0.4994200	0.9312670	0.2530000
	11	0.0352594	0.1844350	0.0008937	-0.0298823
	12	0.0267123	-0.1612410	0.0681111	-0.2519370
	13	0.1198430	-0.3247780	0.0485569	-0.2149400
	14	0.0287304	0.1670470	0.6964990	-0.4597700
	15	0.0002694	0.0164119	0.0003370	0.0183555
	16	0.0000053	0.0023036	0.0000030	0.0017473
	17	0.0000001	0.0003155	0.0000000	0.0001876
11.620	0	0.3991700	-0.4897280	0.0819513	-0.2742910
	1	0.1047670	-0.3062540	0.3991700	-0.4897280
	2	0.4392200	-0.4962920	0.1290380	-0.3352420
	3	0.2368250	-0.4251340	0.4837670	-0.4997360
	4	0.4966860	-0.4999890	0.3548520	-0.4784680
	5	0.6085440	-0.4880760	0.5109900	-0.4998790
	6	0.6044630	-0.4889660	0.8363210	-0.3699840
	7	0.9654220	-0.1827080	0.6723810	-0.4693450
	8	0.9888850	-0.1048420	0.9785290	0.1449480
	9	0.9710150	0.1677660	0.9291690	0.2565420
	10	0.6314590	0.4824090	0.9642950	0.1855540
	11	0.0815109	0.2736180	0.0223354	0.1477720
	12	0.0155892	-0.1238800	0.0643097	-0.2453040
	13	0.0838967	-0.2772330	0.0471902	-0.2120450
	14	0.0811787	0.2731090	0.1443840	-0.3514780
	15	0.0004775	0.0218470	0.0007404	0.0271999
	16	0.0000092	0.0030291	0.0000059	0.0024228
	17	0.0000002	0.0004202	0.0000001	0.0002602

NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
11.980	0	0.1113660	-0.3145840	0.0642109	-0.2451280
	1	0.0887862	-0.2844350	0.1113660	-0.3145840
	2	0.1113790	-0.3146010	0.1166970	-0.3210590
	3	0.2205430	-0.4146130	0.1113920	-0.3146170
	4	0.1409890	-0.3480100	0.3491170	-0.4766910
	5	0.5382520	-0.4985350	0.1684770	-0.3742890
	6	0.4050000	-0.4908920	0.7558910	-0.4295580
	7	0.7975050	-0.4018590	0.6062920	-0.4885710
	8	0.9481720	-0.2216790	0.8479250	-0.3590940
	9	0.9943010	-0.0752732	0.9453270	0.2273410
	10	0.8878050	0.3156070	0.9892400	0.1031690
	11	0.3621550	0.4806230	0.7388900	0.4392400
	12	0.0010882	0.0329704	0.0328364	-0.1782080
	13	0.0350696	-0.1859650	0.0465834	-0.2107450
	14	0.3542380	-0.4782820	0.0382350	-0.1917630
	15	0.0030749	0.0553661	0.0159488	0.1252770
	16	0.0000473	0.0068739	0.0000438	0.0066177
	17	0.0000009	0.0009750	0.0000005	0.0006870
	18	0.0000000	0.0001310	0.	0.
12.100	0	0.0359848	-0.1862520	0.0641185	-0.2449640
	1	0.0883479	-0.2838000	0.0359848	-0.1862520
	2	0.0386657	-0.1927970	0.1161570	-0.3204130
	3	0.2129450	-0.4093890	0.0413049	-0.1989940
	4	0.0817875	-0.2740410	0.3366100	-0.4725500
	5	0.4908210	-0.4999160	0.1245140	-0.3301670
	6	0.3699380	-0.4827880	0.6835840	-0.4650780
	7	0.6933430	-0.4611060	0.6033150	-0.4892100
	8	0.9273290	-0.2595960	0.7043620	-0.4563290
	9	0.9794430	-0.1418950	0.9603230	0.1952000
	10	0.9417570	0.2342020	0.9904530	0.0972421
	11	0.4874570	0.4998430	0.9083290	0.2885610
	12	0.0111836	0.1051590	0.0149820	-0.1214810
	13	0.0261069	-0.1594350	0.0461801	-0.2098750
	14	0.1507420	-0.3577970	0.0337985	-0.1807100
	15	0.0063009	0.0791280	0.0971261	0.2961290
	16	0.0000820	0.0090554	0.0000884	0.0094028
	17	0.0000016	0.0012846	0.0000009	0.0009483
	18	0.0000000	0.0001750	0.0000000	0.0001029

## NOLTR 62=161

## REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
12.460	0	0.0189742	0.1364340	0.0499169	-0.2177730
	1	0.0665838	-0.2493000	0.0189742	0.1364340
	2	0.0063107	0.0791890	0.0861645	-0.2806070
	3	0.1371700	-0.3440270	0.0006640	0.0257591
	4	0.0204857	-0.1416550	0.2070470	-0.4051890
	5	0.2343600	-0.4235980	0.0828336	-0.2756310
	6	0.3087230	-0.4619670	0.2683030	-0.4430760
	7	0.3534760	-0.4780490	0.5963920	-0.4906210
	8	0.8150300	-0.3882730	0.4195290	-0.4934820
	9	0.9054490	-0.2925940	0.9944830	-0.0740690
	10	0.9991240	-0.0295761	0.9910300	0.0942842
	11	0.8215940	0.3828540	0.9999920	0.0028083
	12	0.1581470	0.3648790	0.1218530	0.3271160
	13	0.0037780	-0.0613494	0.0382776	-0.1918660
	14	0.0422335	-0.2011210	0.0302044	-0.1711490
	15	0.1515370	0.3585710	0.0488464	-0.2155470
	16	0.0004550	0.0213251	0.0009338	0.0305443
	17	0.0000085	0.0029138	0.0000063	0.0025145
	18	0.0000002	0.0004110	0.0000001	0.0002720
12.580	0	0.0361215	0.1865930	0.0349569	-0.1836710
	1	0.0464103	-0.2103720	0.0361215	0.1865930
	2	0.0143382	0.1188810	0.0599802	-0.2374500
	3	0.0894804	-0.2854360	0.0029135	0.0538987
	4	0.0157028	-0.1243230	0.1296230	-0.3358880
	5	0.1332160	-0.3398080	0.0813744	-0.2734090
	6	0.2915350	-0.4544690	0.1371230	-0.3439770
	7	0.2718810	-0.4449290	0.5822280	-0.4931920
	8	0.7493060	-0.4334130	0.3824810	-0.4859930
	9	0.8754680	-0.3301870	0.9408420	-0.2359190
	10	0.9873820	-0.1116180	0.9919800	0.0891926
	11	0.8966440	0.3044230	0.9989890	-0.0317878
	12	0.2629880	0.4402560	0.3954780	0.4889530
	13	0.0002689	-0.0163974	0.0315360	-0.1747610
	14	0.0316091	-0.1749570	0.0301380	-0.1709670
	15	0.9231660	0.2663270	0.0316865	-0.1751640
	16	0.0008377	0.0289309	0.0024450	0.0493866
	17	0.0000146	0.0038249	0.0000123	0.0035047
	18	0.0000003	0.0005432	0.0000001	0.0003748



NOLTR 62-161

REFRACTIVE INDEX M= 1.500

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
12.940	0	0.0587608	0.2351770	0.0066840	0.0814823
	1	0.0060745	0.0777020	0.0587608	0.2351770
	2	0.0248924	0.1557970	0.0054798	0.0738226
	3	0.0054798	0.0738225	0.0054101	0.0733539
	4	0.0099724	-0.0993630	0.0054798	0.0738224
	5	0.0000044	0.0020952	0.0762965	-0.2654720
	6	0.2066860	-0.4049280	0.0031732	-0.0562421
	7	0.1390010	-0.3459480	0.4317110	-0.4953150
	8	0.4435320	-0.4968010	0.3499550	-0.4769550
	9	0.7663330	-0.4231630	0.4572650	-0.4981700
	10	0.8939090	-0.3079540	0.9998410	0.0126098
	11	0.9987280	0.0356461	0.9958930	-0.0639534
	12	0.6768460	0.4676810	0.9955590	0.0664900
	13	0.0334312	0.1797600	0.0006006	-0.0245000
	14	0.0111694	-0.1050940	0.0291457	-0.1682150
	15	0.0615308	-0.2403010	0.0201744	-0.1405970
	16	0.0071620	0.0843253	0.9902890	0.0980647
	17	0.0000763	0.0087354	0.0001005	0.0100259
	18	0.0000015	0.0012389	0.0000010	0.0009804
	19	0.0000000	0.0001724	0.0000000	0.0001080
13.060	0	0.0592692	0.2361280	0.0495446	0.2170020
	1	0.0495169	0.2169450	0.0592692	0.2361280
	2	0.0254498	0.1574870	0.0494891	0.2168870
	3	0.0457059	0.2088460	0.0055149	0.0740573
	4	0.0076131	-0.0869204	0.0422906	0.2012510
	5	0.0075137	0.0863553	0.0670666	-0.2501370
	6	0.1598940	-0.3665070	0.0000803	-0.0089605
	7	0.1177860	-0.3223550	0.3267820	-0.4690370
	8	0.3275100	-0.4693050	0.3496670	-0.4768650
	9	0.7183880	-0.4497850	0.3282130	-0.4695630
	10	0.8519290	-0.3551700	0.9972190	-0.0526588
	11	0.9972610	-0.0522611	0.9958130	-0.0645684
	12	0.7970740	0.4021780	0.9973040	-0.0518486
	13	0.0768395	0.2663370	0.0097956	0.0984868
	14	0.0061289	-0.0780469	0.0275928	-0.1638030
	15	0.0395452	-0.1948880	0.0194469	-0.1380890
	16	0.0186479	0.1352780	0.0924320	-0.2896350
	17	0.0001345	0.0115970	0.0002171	0.0147315
	18	0.0000026	0.0016261	0.0000018	0.0013537
	19	0.0000001	0.0002286	0.0000000	0.0001488

Table 3

Real and Imaginary Parts of the Scattering Coefficients  
A(N) and B(N) for the Isotropic, Dielectric, Infinite  
Circular Cylinder. Refractive Index  $m = 1.600$ .

Range of Circumference to Wavelength Ratio;  $x = \pi a/\lambda$ ,

0.100	(0.100)	8.200
8.600	(0.600)	11.000
8.700	(0.600)	11.100
8.800	(0.600)	10.600
11.800	(0.200)	12.800

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
0.100	0	0.	0.	0.	0.0124787
	1	0.	0.	0.	0.
0.200	0	0.0000001	0.0002461	0.0026624	0.0515293
	1	0.0001923	0.0138646	0.0000001	0.0002461
0.300	0	0.0000016	0.0012532	0.0143703	0.1190120
	1	0.0009745	0.0312010	0.0000016	0.0012532
	2	0.0000001	0.0003457	0.	0.
0.400	0	0.0000160	0.0039986	0.0469797	0.2115950
	1	0.0030488	0.0551314	0.0000160	0.0039986
	2	0.0000012	0.0010863	0.	0.
0.500	0	0.0000980	0.0098985	0.1118390	0.3151680
	1	0.0072593	0.0848918	0.0000980	0.0098985
	2	0.0000069	0.0026333	0.	0.
0.600	0	0.0004376	0.0209155	0.2087690	0.4064290
	1	0.0144243	0.1192320	0.0004376	0.0209155
	2	0.0000293	0.0054155	0.0000001	0.0002957
0.700	0	0.0015778	0.0396908	0.3207160	0.4667520
	1	0.0251188	0.1564860	0.0015778	0.0396908
	2	0.0000988	0.0099393	0.0000006	0.0007449
	3	0.0000000	0.0002013	0.	0.
0.800	0	0.0048784	0.0696747	0.4248800	0.4943250
	1	0.0395025	0.1947870	0.0048784	0.0696747
	2	0.0002816	0.0167784	0.0000027	0.0016599
	3	0.0000002	0.0004426	0.	0.
0.900	0	0.0134228	0.1150770	0.5072380	0.4999480
	1	0.0572783	0.2323740	0.0134228	0.1150770
	2	0.0007059	0.0265588	0.0000114	0.0033708
	3	0.0000008	0.0008840	0.	0.
1.000	0	0.0335581	0.1800890	0.5651590	0.4957360
	1	0.0778177	0.2678640	0.0335581	0.1800890
	2	0.0015974	0.0399362	0.0000405	0.0063674
	3	0.0000027	0.0016366	0.0000000	0.0001274
1.100	0	0.0767047	0.2661220	0.6022360	0.4894360
	1	0.1004120	0.3005480	0.0767047	0.2661220
	2	0.0033240	0.0575580	0.0001290	0.0113578
	3	0.0000081	0.0028496	0.0000001	0.0002712
1.200	0	0.1588400	0.3655270	0.6236660	0.4844650
	1	0.1245590	0.3302190	0.1588400	0.3655270
	2	0.0064425	0.0800065	0.0063745	0.0193487
	3	0.0000222	0.0047162	0.0000003	0.0005402
	4	0.0000000	0.0001425	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
1.300	0	0.2913990	0.4544070	0.6342760	0.4816320
	1	0.1502140	0.3572810	0.2913990	0.4544070
	2	0.0117401	0.1077140	0.0010097	0.0317596
	3	0.0000559	0.0074799	0.0000010	0.0010180
	4	0.0000001	0.0002650	0.	0.
1.400	0	0.4627220	0.4986080	0.6381280	0.4805420
	1	0.1779670	0.3824850	0.4627220	0.4986080
	2	0.0202480	0.1408470	0.0025650	0.0505807
	3	0.0001309	0.0114411	0.0000033	0.0018310
	4	0.0000002	0.0004693	0.	0.
1.500	0	0.6339820	0.4817150	0.6386990	0.4803780
	1	0.2091850	0.4067260	0.6339820	0.4817150
	2	0.0332076	0.1791780	0.0062124	0.0785736
	3	0.0002878	0.0169630	0.0000100	0.0031651
	4	0.0000006	0.0007970	0.	0.
1.600	0	0.7685750	0.4217440	0.6391740	0.4802400
	1	0.2461470	0.4307650	0.7685750	0.4217440
	2	0.0519648	0.2219560	0.0144772	0.1194470
	3	0.0005995	0.0244777	0.0000280	0.0052893
	4	0.0000017	0.0013049	0.0000000	0.0001627
1.700	0	0.8569150	0.3501590	0.6427260	0.4791970
	1	0.2921820	0.4547650	0.8569150	0.3501590
	2	0.0777891	0.2678390	0.0326463	0.1777090
	3	0.0011910	0.0344903	0.0000737	0.0085870
	4	0.0000043	0.0020685	0.0000001	0.0002947
1.800	0	0.9088540	0.2878160	0.6527270	0.4761030
	1	0.3517040	0.4775020	0.9088540	0.2878160
	2	0.1116530	0.3149390	0.0712220	0.2571950
	3	0.0022690	0.0475805	0.0001851	0.0136022
	4	0.0000102	0.0031868	0.0000003	0.0005157
	5	0.0000000	0.0001319	0.	0.
1.900	0	0.9376590	0.2417740	0.6728730	0.4691640
	1	0.4297610	0.4950420	0.9376590	0.2417740
	2	0.1540410	0.3609880	0.1486420	0.3557350
	3	0.0041643	0.0643973	0.0004456	0.0211052
	4	0.0000229	0.0047870	0.0000008	0.0008753
	5	0.0000000	0.0002208	0.	0.
2.000	0	0.9530660	0.2114980	0.7070070	0.4551350
	1	0.5302140	0.4990860	0.9530660	0.2114980
	2	0.2048880	0.4036200	0.2881410	0.4528970
	3	0.0073890	0.0856411	0.0010372	0.0321893
	4	0.0000494	0.0070298	0.0000021	0.0014457
	5	0.0000001	0.0003591	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
2.100	0	0.9609090	0.1938110	0.7582020	0.4281720
	1	0.6514910	0.4764980	0.9609090	0.1938110
	2	0.2636860	0.4406310	0.4941850	0.4999660
	3	0.0127108	0.1120230	0.0023496	0.0484161
	4	0.0001023	0.0101161	0.0000054	0.0023313
	5	0.0000003	0.0005689	0.	0.
2.200	0	0.9644710	0.1851130	0.8262140	0.3789250
	1	0.7808770	0.4136520	0.9644710	0.1851130
	2	0.3297480	0.4701220	0.7177450	0.4500970
	3	0.0212415	0.1441880	0.0052149	0.0720258
	4	0.0002044	0.0142948	0.0000135	0.0036804
	5	0.0000008	0.0008805	0.0000000	0.0001438
2.300	0	0.9656730	0.1820660	0.9028570	0.2961520
	1	0.8942100	0.3075680	0.9656730	0.1820660
	2	0.4024970	0.4904010	0.8839950	0.3202310
	3	0.0345266	0.1825770	0.0114125	0.1062180
	4	0.0003950	0.0198708	0.0000325	0.0057022
	5	0.0000018	0.0013337	0.0000001	0.0002411
2.400	0	0.9658260	0.1816750	0.9685550	0.1745170
	1	0.9685400	0.1745570	0.9658260	0.1816750
	2	0.4816220	0.4996620	0.9685250	0.1745960
	3	0.0546083	0.2272140	0.0247638	0.1554050
	4	0.0007413	0.0272162	0.0000755	0.0086914
	5	0.0000039	0.0019809	0.0000001	0.0003953
2.500	0	0.9660350	0.1811390	0.9993100	0.0262524
	1	0.9982260	0.0420872	0.9660350	0.1811390
	2	0.5669460	0.4954980	0.9968440	0.0560923
	3	0.0840079	0.2774000	0.0534475	0.2249240
	4	0.0013547	0.0367811	0.0001706	0.0130624
	5	0.0000083	0.0028899	0.0000004	0.0006349
2.600	0	0.9673800	0.1776390	0.9855090	-0.1195040
	1	0.9952160	-0.0690037	0.9673800	0.1776390
	2	0.6578330	0.4744350	0.9992810	-0.0267970
	3	0.1255490	0.3313400	0.1143100	0.3181870
	4	0.0024173	0.0491069	0.0003765	0.0194012
	5	0.0000172	0.0041476	0.0000010	0.0010009
2.700	0	0.9709150	0.1680450	0.9404110	-0.2367240
	1	0.9763560	-0.1519390	0.9709150	0.1680450
	2	0.7520380	0.4318300	0.9934960	-0.0803837
	3	0.1819340	0.3857900	0.2372470	0.4253950
	4	0.0042218	0.0648380	0.0008154	0.0285430
	5	0.0000344	0.0058637	0.0000024	0.0015514
2.700	6	0.0000001	0.0003694	0.	0.

# NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.800	0	0.9774200	0.1485600	0.8861630	-0.3176130
	1	0.9540140	-0.2094540	0.9774200	0.1485600
	2	0.8441370	0.3627250	0.9870590	-0.1130190
	3	0.2550470	0.4358880	0.4524350	0.4977320
	4	0.0072315	0.0847302	0.0017413	0.0416923
	5	0.0000669	0.0081767	0.0000056	0.0027680
	6	0.0000003	0.0005532	0.0000000	0.0001082
2.900	0	0.9867500	0.1143460	0.8383250	-0.3681520
	1	0.9344890	-0.2474260	0.9867490	0.1143460
	2	0.9243910	0.2643710	0.9824190	-0.1314230
	3	0.3450770	0.4753930	0.7264910	0.4457600
	4	0.0121705	0.1096470	0.0036874	0.0606118
	5	0.0001268	0.0112596	0.0000127	0.0035653
	6	0.0000007	0.0008154	0.0000000	0.0001733
3.000	0	0.9964570	0.0594187	0.8029100	-0.3978010
	1	0.9198680	-0.2714980	0.9964570	0.0594187
	2	0.9799650	0.1401200	0.9798560	-0.1404920
	3	0.4497470	0.4974680	0.9312480	0.2530320
	4	0.0201536	0.1405260	0.0077894	0.0879130
	5	0.0002350	0.0153277	0.0000281	0.0053028
	6	0.0000014	0.0011841	0.0000001	0.0002730
3.100	0	0.9995060	-0.0222189	0.7800040	-0.4142430
	1	0.9100220	-0.2861500	0.9995060	-0.0222189
	2	0.9999960	0.0019817	0.9788590	-0.1438540
	3	0.5640210	0.4958840	0.9989640	0.0321633
	4	0.0328674	0.1782900	0.0165226	0.1274740
	5	0.0004265	0.0206485	0.0000609	0.0078029
	6	0.0000029	0.0016956	0.0000002	0.0004233
	7	0.0000000	0.0001019	0.	0.
3.200	0	0.9821610	-0.1323650	0.7672430	-0.4225890
	1	0.9038420	-0.2948080	0.9821610	-0.1323650
	2	0.9822130	-0.1321750	0.9786930	-0.1444050
	3	0.6805000	0.4662830	0.9822670	-0.1319810
	4	0.0528032	0.2236400	0.0354272	0.1848570
	5	0.0007598	0.0275544	0.0001295	0.0113782
	6	0.0000057	0.0023973	0.0000004	0.0006477
	7	0.0000000	0.0001536	0.	0.
3.300	0	0.9266970	-0.2606330	0.7616140	-0.4260960
	1	0.8998500	-0.3002000	0.9266970	-0.2606330
	2	0.9350430	-0.2464500	0.9786010	-0.1447110
	3	0.7903550	0.4070550	0.9417790	-0.2341600
	4	0.0835048	0.2766440	0.0771238	0.2667880
	5	0.0013309	0.0364571	0.0002713	0.0164688
	6	0.0000112	0.0033492	0.0000010	0.0009782
	7	0.0000000	0.0002282	0.	0.

## NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.400	0	0.8246800	-0.3802410	0.7601430	-0.4269960
	1	0.8964330	-0.3046980	0.8246800	-0.3802410
	2	0.8727330	-0.3332720	0.9778090	-0.1473040
	3	0.8844320	0.3197060	0.9042900	-0.2941930
	4	0.1297120	0.3359860	0.1694820	0.3751770
	5	0.0022966	0.0478676	0.0005621	0.0237030
	6	0.0006214	0.0046274	0.0000021	0.0014599
	7	0.0000001	0.0003345	0.	0.
3.500	0	0.6916570	-0.4618090	0.7600310	-0.4270640
	1	0.8918540	-0.3105650	0.6916570	-0.4618090
	2	0.8083900	-0.3935680	0.9753960	-0.1549140
	3	0.9542850	0.2080670	0.8766830	-0.3288010
	4	0.1970920	0.3978020	0.3617840	0.4805170
	5	0.0039115	0.0624195	0.0011567	0.0339912
	6	0.0000400	0.0063279	0.0000046	0.0021553
	7	0.0000002	0.0004840	0.0000000	0.0001156
3.600	0	0.5593190	-0.4964690	0.7585590	-0.4279570
	1	0.8841020	-0.3201020	0.5593190	-0.4964690
	2	0.7503040	-0.4328370	0.9699810	-0.1706410
	3	0.9932020	0.0821661	0.8587500	-0.3482800
	4	0.2910020	0.4542240	0.6726920	0.4692310
	5	0.0065876	0.0808963	0.0023753	0.0486790
	6	0.0000735	0.0085718	0.0000099	0.0031511
	7	0.0000005	0.0006922	0.0000000	0.0001774
3.700	0	0.4514430	-0.4976370	0.7528650	-0.4313460
	1	0.8705830	-0.3356610	0.4514430	-0.4976370
	2	0.7020060	-0.4573770	0.9591250	-0.1980010
	3	0.9974700	-0.0502323	0.8484290	-0.3586050
	4	0.4136410	0.4924660	0.9417780	0.2341630
	5	0.0109905	0.1042580	0.0048959	0.0697996
	6	0.0001325	0.0115106	0.0000209	0.0045673
	7	0.0000010	0.0009788	0.0000001	0.0002688
3.800	0	0.3744100	-0.4839700	0.7396000	-0.4388530
	1	0.8476170	-0.3593920	0.3744100	-0.4839700
	2	0.6638690	-0.4723640	0.9383250	-0.2405650
	3	0.9676600	-0.1769020	0.8434580	-0.3633680
	4	0.5597780	0.4964140	0.9951520	-0.0694579
	5	0.0181950	0.1336560	0.0102031	0.1004940
	6	0.0002352	0.0153345	0.0000432	0.0065704
	7	0.0000019	0.0013693	0.0000002	0.0004028
3.900	0	0.3240330	-0.4680120	0.7144770	-0.4516630
	1	0.8098110	-0.3924500	0.3240330	-0.4680120
	2	0.6346190	-0.4815370	0.8996340	-0.3004870
	3	0.9091740	-0.2873610	0.8417880	-0.3649390
	4	0.7135750	0.4520900	0.9204000	-0.2706730
	5	0.0299352	0.1704090	0.0216898	0.1456680
	6	0.0004115	0.0202825	0.0000882	0.0093928
	7	0.0000036	0.0018966	0.0000004	0.0005972
	8	0.0000000	0.0001370	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M = 1.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.000	0	0.2934360	-0.4553370	0.6718410	-0.4695430
	1	0.7497400	-0.4331630	0.2934360	-0.4553370
	2	0.6122820	-0.4872300	0.8309950	-0.3747560
	3	0.8312480	-0.3745330	0.8416010	-0.3651140
	4	0.8509900	0.3560980	0.8314930	-0.3743160
	5	0.0489968	0.2158610	0.0475159	0.2127400
	6	0.0007110	0.0266554	0.0001786	0.0133620
	7	0.0000068	0.0026026	0.0000008	0.0008769
	8	0.0000000	0.0001978	0.	0.
4.100	0	0.2765130	-0.4472740	0.6048310	-0.4888870
	1	0.6593070	-0.4739420	0.2765130	-0.4472740
	2	0.5946380	-0.4909620	0.7199210	-0.4490380
	3	0.7445090	-0.4361370	0.8412070	-0.3654830
	4	0.9490730	0.2198480	0.7633500	-0.4250250
	5	0.0797941	0.2709740	0.1081490	0.3105690
	6	0.0012149	0.0348337	0.0003590	0.0189446
	7	0.0000125	0.0035402	0.0000016	0.0012760
	8	0.0000001	0.0002824	0.	0.
4.200	0	0.2685570	-0.4432090	0.5076710	-0.4999410
	1	0.5352270	-0.4987570	0.2685570	-0.4432090
	2	0.5793780	-0.4936590	0.5661010	-0.4956110
	3	0.6583220	-0.4742720	0.8388810	-0.3676410
	4	0.9957660	0.0649279	0.7174430	-0.4502430
	5	0.1290860	0.3352950	0.2531580	0.4348200
	6	0.0020564	0.0453014	0.0007197	0.0268131
	7	0.0000228	0.0047767	0.0000034	0.0018419
	8	0.0000002	0.0003992	0.0000000	0.0001111
4.300	0	0.2659420	-0.4418340	0.3820550	-0.4858900
	1	0.3882300	-0.4873470	0.2659420	-0.4418340
	2	0.5640990	-0.4958740	0.3948070	-0.4888090
	3	0.5791450	-0.4936960	0.8326380	-0.3732990
	4	0.9924210	-0.0867281	0.6885580	-0.4630830
	5	0.2064090	0.4047270	0.5593700	0.4964630
	6	0.0034550	0.0586773	0.0014451	0.0379870
	7	0.0000409	0.0063965	0.0000070	0.0026392
	8	0.0000003	0.0005592	0.0000000	0.0001655
4.400	0	0.2656660	-0.4416870	0.2452120	-0.4302130
	1	0.2453900	-0.4303180	0.2656660	-0.4416870
	2	0.5462140	-0.4978600	0.2455670	-0.4304230
	3	0.5102760	-0.4998940	0.8198770	-0.3842900
	4	0.9490960	-0.2198010	0.6716410	-0.4696160
	5	0.3227440	0.4675260	0.9217410	0.2685790
	6	0.0057726	0.0757580	0.0029227	0.0539830
	7	0.0000724	0.0085062	0.0000141	0.0037574
	8	0.0000006	0.0007760	0.0000001	0.0002440



NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.500	0	0.2649730	-0.4413190	0.1269220	-0.3328860
	1	0.1342610	-0.3409320	0.2649730	-0.4413190
	2	0.5228220	-0.4994790	0.1412380	-0.3482660
	3	0.4525160	-0.4977400	0.7968520	-0.4023420
	4	0.8784180	-0.3268020	0.6627990	-0.4727540
	5	0.4841050	0.4997470	0.9820670	-0.1327070
	6	0.0096125	0.0975712	0.0059985	0.0772171
	7	0.0001264	0.0112403	0.0000283	0.0053200
	8	0.0000011	0.0010680	0.0000001	0.0003568
4.600	0	0.2610920	-0.4392300	0.0491932	-0.2162710
	1	0.0641623	-0.2450420	0.2610920	-0.4392300
	2	0.4905980	-0.4999120	0.0790847	-0.2698710
	3	0.4050890	-0.4909090	0.7579240	-0.4283400
	4	0.7918390	-0.4059930	0.6590920	-0.4740140
	5	0.6774950	0.4674350	0.8389570	-0.3675710
	6	0.0159906	0.1254390	0.0126169	0.1116140
	7	0.0002182	0.0147685	0.0000562	0.0074989
	8	0.0000021	0.0014579	0.0000003	0.0005175
	9	0.0000000	0.0001151	0.	0.
4.700	0	0.2510630	-0.4336250	0.0117978	-0.1079750
	1	0.0270777	-0.1623100	0.2510630	-0.4336250
	2	0.4458340	-0.4970570	0.0454907	-0.2083780
	3	0.3664070	-0.4818230	0.6949060	-0.4604470
	4	0.6984240	-0.4589420	0.6581970	-0.4743140
	5	0.8594890	0.3475160	0.7023590	-0.4572210
	6	0.0266401	0.1610290	0.0275631	0.1637170
	7	0.0003729	0.0193062	0.0001110	0.0105355
	8	0.0000039	0.0019750	0.0000006	0.0007449
	9	0.0000000	0.0001628	0.	0.
4.800	0	0.2317300	-0.4219370	0.0005408	-0.0232484
	1	0.0101111	-0.1000440	0.2317300	-0.4219370
	2	0.3849630	-0.4865870	0.0282600	-0.1657150
	3	0.3345640	-0.4718380	0.5978920	-0.4903240
	4	0.6049030	-0.4888720	0.6581130	-0.4743420
	5	0.9744720	0.1577230	0.6109530	-0.4875340
	6	0.0445581	0.2063320	0.0636265	0.2440860
	7	0.0006318	0.0251284	0.0002183	0.0147734
	8	0.0000071	0.0026563	0.0000011	0.0010645
	9	0.0000000	0.0002282	0.	0.
4.900	0	0.2000830	-0.4000620	0.0012871	0.0358531
	1	0.0033117	-0.0574521	0.2000830	-0.4000620
	2	0.3062000	-0.4609140	0.0197124	-0.1390100
	3	0.3075850	-0.4614940	0.4611920	-0.4984920
	4	0.5160250	-0.4997430	0.6569370	-0.4747320
	5	0.9976590	-0.0483244	0.5541370	-0.4970600
	6	0.0749724	0.2633470	0.1575790	0.3643460
	7	0.0010632	0.0325891	0.0004291	0.0207114
	8	0.0000126	0.0035490	0.0000023	0.0015119
	9	0.0000001	0.0003173	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
5.000	0	0.1544590	-0.3613880	0.0054407	0.0735602
	1	0.0009423	-0.0306820	0.1544590	-0.3613880
	2	0.2129370	-0.4093840	0.0156844	-0.1242510
	3	0.2835260	-0.4507100	0.2971170	-0.4569880
	4	0.4348730	-0.4957400	0.6526330	-0.4761330
	5	0.9474180	-0.2231970	0.5197700	-0.4996090
	6	0.1269310	0.3328960	0.4065640	0.4911920
	7	0.0017796	0.0421475	0.0008469	0.0290887
	8	0.0000222	0.0047120	0.0000046	0.0021348
	9	0.0000002	0.0004376	0.0000000	0.0001453
5.100	0	0.0973513	-0.2964360	0.0091847	0.0953959
	1	0.0002383	-0.0154359	0.0973513	-0.2964360
	2	0.1177910	-0.3223600	0.0140303	-0.1176160
	3	0.2604870	-0.4389000	0.1444080	-0.3515030
	4	0.3631160	-0.4808980	0.6427850	-0.4791790
	5	0.8577400	-0.3493160	0.4997470	-0.5000000
	6	0.2152890	0.4110230	0.8560220	0.3510680
	7	0.0029690	0.0544078	0.0016868	0.0410361
	8	0.0000387	0.0062204	0.0000090	0.0029996
	9	0.0000004	0.0005991	0.0000000	0.0002101
5.200	0	0.0398374	-0.1955770	0.0114306	0.1063010
	1	0.0000611	-0.0078189	0.0398374	-0.1955770
	2	0.0418731	-0.2002990	0.0135793	-0.1157360
	3	0.2365980	-0.4249930	0.0441158	-0.2053520
	4	0.3012630	-0.4588070	0.6242620	-0.4843130
	5	0.7546520	-0.4302940	0.4889350	-0.4998780
	6	0.3602750	0.4800800	0.9737150	-0.1599830
	7	0.0049488	0.0701737	0.0034159	0.0583457
	8	0.0000667	0.0081687	0.0000176	0.0041972
	9	0.0000007	0.0008144	0.0000001	0.0003018
5.300	0	0.0033725	-0.0579757	0.0123305	0.1103560
	1	0.0000195	-0.0044152	0.0033725	-0.0579757
	2	0.0036292	-0.0601338	0.0135472	-0.1156010
	3	0.2100520	-0.4073450	0.0038833	-0.0621948
	4	0.2489440	-0.4324010	0.5927930	-0.4913140
	5	0.6519800	-0.4763420	0.4839440	-0.4997420
	6	0.5736400	0.4945470	0.7516410	-0.4320610
	7	0.0082636	0.0905279	0.0071043	0.0839873
	8	0.0001140	0.0106769	0.0000343	0.0058540
	9	0.0000012	0.0010996	0.0000002	0.0004305

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.400	0	0.0096668	0.0978436	0.0124791	0.1110110
	1	0.0000045	-0.0021148	0.0096668	0.0978436
	2	0.0052968	0.0725861	0.0132500	-0.1143440
	3	0.1792320	-0.3835470	0.0025626	0.0505578
	4	0.2052090	-0.4038540	0.5425560	-0.4981860
	5	0.5554850	-0.4969120	0.4823390	-0.4996880
	6	0.8165620	0.3870250	0.5719840	-0.4947910
	7	0.0138684	0.1169450	0.0153982	0.1231300
	8	0.0001932	0.0138978	0.0000664	0.0081471
	9	0.0000022	0.0014752	0.0000004	0.0006104
	10	0.0000000	0.0001296	0.	0.
5.500	0	0.0610559	0.2394330	0.0125682	0.1114010
	1	0.0000045	0.0021206	0.0610559	0.2394330
	2	0.0334230	0.1797380	0.0120221	-0.1089840
	3	0.1430830	-0.3501570	0.0168602	0.1287480
	4	0.1687890	-0.3745660	0.4663880	-0.4988690
	5	0.4670290	-0.4989120	0.4821780	-0.4996820
	6	0.9782450	0.1458230	0.4676390	-0.4989520
	7	0.0234833	0.1514320	0.0355428	0.1851470
	8	0.0003251	0.0180273	0.0001283	0.0113285
	9	0.0000039	0.0019672	0.0000007	0.0008606
	10	0.0000000	0.0001791	0.	0.
5.600	0	0.1368910	0.3437320	0.0133183	0.1146340
	1	0.0001323	0.0115021	0.1368910	0.3437320
	2	0.0711059	0.2570020	0.0093294	-0.0961374
	3	0.1018930	-0.3025070	0.0331386	0.1789980
	4	0.1383050	-0.3452200	0.3585570	-0.4795770
	5	0.3869820	-0.4870590	0.4817080	-0.4996650
	6	0.9839680	-0.1255990	0.4081450	-0.4914900
	7	0.0403038	0.1966710	0.0901172	0.2863500
	8	0.0005440	0.0233186	0.0002485	0.0157623
	9	0.0000068	0.0026084	0.0000015	0.0012072
	10	0.0000001	0.0002458	0.	0.
5.700	0	0.2123970	0.4090040	0.0156256	0.1240220
	1	0.0008797	0.0296465	0.2123970	0.4090040
	2	0.1068130	0.3088760	0.0051648	-0.0716809
	3	0.0586677	-0.2350020	0.0459445	0.2093650
	4	0.1124120	-0.3158720	0.2237690	-0.4167690
	5	0.3152930	-0.4646330	0.4791440	-0.4995650
	6	0.8802270	-0.3246960	0.3737850	-0.4838080
	7	0.0704578	0.2559170	0.2574940	0.4372540
	8	0.0009070	0.0301030	0.0004837	0.0219888
	9	0.0000118	0.0034404	0.0000028	0.0016857
	10	0.0000001	0.0003352	0.0000000	0.0001224

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.800	0	0.2734670	0.4457390	0.0209582	0.1432440
	1	0.0037010	0.0607229	0.2734670	0.4457390
	2	0.1354490	0.3422030	0.0009321	-0.0305167
	3	0.0200224	-0.1427890	0.0541427	0.2262990
	4	0.0898922	-0.2860270	0.0912878	-0.2880180
	5	0.2518620	-0.4340820	0.4724620	-0.4992410
	6	0.7449130	-0.4359100	0.3541040	-0.4782410
	7	0.1259540	0.3317980	0.7200110	0.4489930
	8	0.0015092	0.0388195	0.0009516	0.0308326
	9	0.0000204	0.0045158	0.0000055	0.0023447
	10	0.0000002	0.0004540	0.0000000	0.0001743
5.900	0	0.3166700	0.4651780	0.0321056	0.1762800
	1	0.0120777	0.1092330	0.3166700	0.4651780
	2	0.1560980	0.3629490	0.0010958	0.0330852
	3	0.0006580	-0.0256440	0.0583955	0.2344900
	4	0.0697300	-0.2546910	0.0106341	-0.1025720
	5	0.1965770	-0.3974100	0.4591750	-0.4983310
	6	0.6181600	-0.4858380	0.3433730	-0.4748350
	7	0.2298110	0.4207110	0.9770600	-0.1497110
	8	0.0025123	0.0500600	0.0019049	0.0436036
	9	0.0000348	0.0059011	0.0000106	0.0032513
	10	0.0000004	0.0006114	0.0000001	0.0002470
6.000	0	0.3440090	0.4750440	0.0543466	0.2267000
	1	0.0330338	0.1787250	0.3440090	0.4750440
	2	0.1698700	0.3755190	0.0154443	0.1233120
	3	0.0116362	0.1072420	0.0599547	0.2374030
	4	0.0511947	-0.2203950	0.0078698	0.0883623
	5	0.1492570	-0.3563420	0.4360750	-0.4958970
	6	0.5101330	-0.4998970	0.3381810	-0.4730910
	7	0.4185820	0.4933270	0.6643810	-0.4722060
	8	0.0041955	0.0646367	0.0039196	0.0624836
	9	0.0000590	0.0076809	0.0000202	0.0044977
	10	0.0000007	0.0008184	0.0000001	0.0003479
6.100	0	0.3591810	0.4797600	0.0966294	0.2954520
	1	0.0780695	0.2682810	0.3591810	0.4797600
	2	0.1786560	0.3830640	0.0597603	0.2370420
	3	0.0597600	0.2370420	0.0601778	0.2378160
	4	0.0339828	-0.1811850	0.0597597	0.2370410
	5	0.1095790	-0.3123640	0.3989680	-0.4896900
	6	0.4196400	-0.4935000	0.3362740	-0.4724340
	7	0.7066030	0.4553190	0.4495290	-0.4974460
	8	0.0070536	0.0836890	0.0084129	0.0913355
	9	0.0000993	0.0099629	0.0000386	0.0062137
	10	0.0000012	0.0010897	0.0000002	0.0004876
	11	0.0000000	0.0001007	0.	0.

# NOLTR 62-161

## REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
6.200	0	0.3659860	0.4817050	0.1708110	0.3763440
	1	0.1601640	0.3667580	0.3659860	0.4817050
	2	0.1845710	0.3879490	0.1490460	0.3561340
	3	0.1371660	0.3440230	0.0603928	0.2382130
	4	0.0184694	-0.1346410	0.1271940	0.3331900
	5	0.0770574	-0.2666820	0.3428640	-0.4746670
	6	0.3430390	-0.4747240	0.3359620	-0.4723260
	7	0.9609580	0.1936950	0.3432190	-0.4747840
	8	0.0119921	0.1088500	0.0192785	0.1375020
	9	0.0001661	0.0128859	0.0000737	0.0085830
	10	0.0000021	0.0014432	0.0000005	0.0006802
	11	0.0000000	0.0001377	0.	0.
6.300	0	0.3678830	0.4822290	0.2850160	0.4514220
	1	0.2831130	0.4505110	0.3678830	0.4822290
	2	0.1897890	0.3921340	0.2811590	0.4495650
	3	0.2263750	0.4184840	0.0619496	0.2410640
	4	0.0061212	-0.0779984	0.1865130	0.3895200
	5	0.0510788	-0.2201580	0.2632500	-0.4403970
	6	0.2770770	-0.4475550	0.3357920	-0.4722670
	7	0.9715300	-0.1663110	0.2879490	-0.4528070
	8	0.0207375	0.1425040	0.0489961	0.2158640
	9	0.0002766	0.0166293	0.0001409	0.0118711
	10	0.0000036	0.0019023	0.0000009	0.0009450
	11	0.0000000	0.0001871	0.	0.
6.400	0	0.3680180	0.4822660	0.4311930	0.4952430
	1	0.4301430	0.4950960	0.3680180	0.4822660
	2	0.1965820	0.3974130	0.4291140	0.4949500
	3	0.3109570	0.4628850	0.0664191	0.2490130
	4	0.0000735	-0.0085741	0.2303970	0.4210870
	5	0.0309791	-0.1732610	0.1617820	-0.3682510
	6	0.2194880	-0.4139000	0.3343350	-0.4717570
	7	0.8055320	-0.3957900	0.2575700	-0.4372960
	8	0.0367512	0.1881500	0.1466830	0.3537900
	9	0.0004594	0.0214286	0.0002714	0.0164708
	10	0.0000062	0.0024959	0.0000017	0.0013080
	11	0.0000001	0.0002527	0.0000000	0.0001001
6.500	0	0.3694050	0.4826440	0.5816610	0.4932860
	1	0.5706510	0.4949830	0.3694050	0.4826440
	2	0.2074990	0.4055160	0.5602520	0.4963560
	3	0.3817930	0.4858260	0.0759803	0.2649670
	4	0.0056851	0.0751847	0.2594410	0.4383280
	5	0.0161485	-0.1260460	0.0585803	-0.2348380
	6	0.1689420	-0.3747010	0.3300190	-0.4702200
	7	0.6255800	-0.4839730	0.2405590	-0.4274230
	8	0.0673925	0.2507010	0.5210100	-0.4995580
	9	0.0007622	0.0275969	0.0005284	0.0229808
	10	0.0000106	0.0032610	0.0000033	0.0018050
	11	0.0000001	0.0003395	0.0000000	0.0001409

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
6.600	0	0.3751790	0.4841690	0.7072870	0.4550080
	1	0.6820860	0.4656660	0.3751790	0.4841690
	2	0.2256690	0.4180220	0.6584270	0.4742370
	3	0.4365740	0.4959610	0.0940825	0.2919430
	4	0.0304431	0.1718030	0.2767020	0.4473680
	5	0.0061478	-0.0781667	0.0012814	-0.0357738
	6	0.1248290	-0.3305250	0.3209690	-0.4668490
	7	0.4847070	-0.4997660	0.2312990	-0.4216630
	8	0.1292260	0.3354500	0.9910540	-0.0941606
	9	0.0012660	0.0355578	0.0010476	0.0323503
	10	0.0000180	0.0042446	0.0000062	0.0024850
	11	0.0000002	0.0004537	0.0000000	0.0001974
6.700	0	0.3888990	0.4875000	0.7963270	0.4027290
	1	0.7596460	0.4272990	0.3888990	0.4875000
	2	0.2551990	0.4359730	0.7243920	0.4468200
	3	0.4768150	0.4994620	0.1264300	0.3323330
	4	0.0820755	0.2744800	0.2855180	0.4516610
	5	0.0008366	-0.0289121	0.0344474	0.1823750
	6	0.0876236	-0.2818770	0.3048430	-0.4603410
	7	0.3805600	-0.4255250	0.2267190	-0.4187090
	8	0.2600270	0.4386490	0.5785110	-0.4937970
	9	0.0021109	0.0458976	0.0021354	0.0461609
	10	0.0000303	0.0055059	0.0000117	0.0034154
	11	0.0000004	0.0006033	0.0000001	0.0002752
6.800	0	0.4148810	0.4927020	0.8529800	0.3541250
	1	0.8097380	0.3928230	0.4148810	0.4927020
	2	0.3015220	0.4589190	0.7656480	0.4235930
	3	0.5054600	0.4999700	0.1819350	0.3857910
	4	0.1641810	0.3704400	0.2889050	0.4532540
	5	0.0005163	0.0227153	0.1433700	0.3504490
	6	0.0557057	-0.2293520	0.2786940	-0.4483570
	7	0.3019940	-0.4591230	0.2249160	-0.4175270
	8	0.5276430	0.4992350	0.3398610	-0.4736620
	9	0.0035461	0.0594435	0.0045399	0.0672254
	10	0.0000507	0.0071211	0.0000220	0.0046909
	11	0.0000006	0.0007983	0.0000001	0.0003822
6.900	0	0.4584000	0.4982660	0.8866860	0.3169760
	1	0.8393730	0.3671870	0.4584000	0.4982660
	2	0.3711230	0.4831050	0.7897930	0.4074560
	3	0.5256880	0.4993400	0.2719160	0.4449470
	4	0.2715120	0.4447400	0.2895090	0.4535340
	5	0.0061010	0.0778704	0.2710980	0.4445260
	6	0.0311313	-0.1736730	0.2390430	-0.4264990
	7	0.2401930	-0.4272000	0.2245410	-0.4172790
	8	0.8984510	0.3020540	0.2414560	-0.4279670
	9	0.0060287	0.0774105	0.0103038	0.1009830
	10	0.0000844	0.0091879	0.0000415	0.0064455
	11	0.0000011	0.0010516	0.0000003	0.0005287

## REFRACTIVE INDEX M= 1.600

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE P(N)	IM B(N)
7.000	0	0.5251710	0.4993660	0.9056700	0.2922880
	1	0.8564350	0.3506480	0.5251710	0.4993660
	2	0.4693060	0.4990570	0.8026280	0.3980160
	3	0.5405050	0.4983570	0.4035840	0.4906160
	4	0.3899780	0.4877450	0.2897470	0.4536450
	5	0.0193145	0.1376280	0.3782760	0.4849570
	6	0.015581	-0.1156470	0.1827670	-0.3864760
	7	0.1894520	-0.3918670	0.2244730	-0.4172350
	8	0.9709730	-0.1670840	0.1949240	-0.3961420
	9	0.0104371	0.1016270	0.0259933	0.1591150
	10	0.0001400	0.0118332	0.0000787	0.0088722
	11	0.0000019	0.0013793	0.0000005	0.0007288
7.100	0	0.6187740	0.4856880	0.9155490	0.2780630
	1	0.8652280	0.3414790	0.6187740	0.4856880
	2	0.5944270	0.4910030	0.8083020	0.3936370
	3	0.5527030	0.4972150	0.5665040	0.4955570
	4	0.5031590	0.4999960	0.2920120	0.4546880
	5	0.0428681	0.2025600	0.4551990	0.4979890
	6	0.0031564	-0.0560935	0.1105500	-0.3135740
	7	0.1463450	-0.3534520	0.2236450	-0.4166870
	8	0.7316610	-0.4430950	0.1705770	-0.3761390
	9	0.0185579	0.1349570	0.0786198	0.2691440
	10	0.0002318	0.0152233	0.0001502	0.0122564
	11	0.0000032	0.0018020	0.0000010	0.0010017
	12	0.0000000	0.0001884	0.	0.
7.200	0	0.7345560	0.4415690	0.9199240	0.2714110
	1	0.8690380	0.3373590	0.7345560	0.4415690
	2	0.7309740	0.4434540	0.8099140	0.3923680
	3	0.5649700	0.4957610	0.7271780	0.4454100
	4	0.5996940	0.4899600	0.2989220	0.4577850
	5	0.0604782	0.2720320	0.5059490	0.4999650
	6	0.0000181	0.0042578	0.0361358	-0.1866280
	7	0.1089830	-0.3116170	0.2209010	-0.4148540
	8	0.5088340	-0.4999220	0.1572700	-0.3640550
	9	0.0343057	0.1820130	0.3217950	0.4671650
	10	0.0003835	0.0195796	0.0002902	0.0170321
	11	0.0000055	0.0023457	0.0000019	0.0013736
	12	0.0000001	0.0002514	0.0000000	0.0001116
7.300	0	0.8530090	0.3540970	0.9212230	0.2693910
	1	0.8703540	0.3359140	0.8530090	0.3540970
	2	0.8519500	0.3551500	0.8100310	0.3922760
	3	0.5800360	0.4935530	0.8509200	0.3561670
	4	0.6756580	0.4681280	0.3136630	0.4639810
	5	0.1364220	0.3432360	0.5373180	0.4986050
	6	0.0042211	0.0648326	0.0000555	0.0074515
	7	0.0765308	-0.2656460	0.2148890	-0.4107450
	8	0.3640720	-0.4811690	0.1500810	-0.3571510
	9	0.0670923	0.2501820	0.9996510	0.0186752
	10	0.0006355	0.0252014	0.0005708	0.0238856
	11	0.0000093	0.0030431	0.0000035	0.0018800
	12	0.0000001	0.0003339	0.0000000	0.0001549

# NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
7.400	0	0.9447380	0.2284910	0.9213260	0.2692300
	1	0.8713180	0.3348470	0.9447380	0.2284910
	2	0.9359080	0.2449170	0.8110430	0.3914740
	3	0.6008070	0.4897330	0.9274300	0.2594290
	4	0.7324410	0.4426860	0.3404260	0.4738520
	5	0.2142040	0.4102690	0.5551950	0.4969440
	6	0.0159381	0.1252360	0.0587603	0.2351760
	7	0.0489124	-0.2156850	0.2039570	-0.4029370
	8	0.2710410	-0.4444970	0.1464950	-0.3536020
	9	0.1420520	0.3491030	0.4926380	-0.4999460
	10	0.0010576	0.0325037	0.0011545	0.0339587
	11	0.0000155	0.0039363	0.0000066	0.0025706
	12	0.0000002	0.0004415	0.0000000	0.0002143
7.500	0	0.9915640	0.0914580	0.9219420	0.2682630
	1	0.8740040	0.3318440	0.9915640	0.0914580
	2	0.9805280	0.1381770	0.8153920	0.3879790
	3	0.6304190	0.4826910	0.9674530	0.1774480
	4	0.7737050	0.4184320	0.3848520	0.4865600
	5	0.3141920	0.4641930	0.5640770	0.4958770
	6	0.0355661	0.1852060	0.2167910	0.4120590
	7	0.0265972	-0.1609030	0.1860730	-0.3891660
	8	0.2074080	-0.4054510	0.1450340	-0.3521350
	9	0.3298920	0.4701740	0.2457250	-0.4305160
	10	0.0017735	0.0420757	0.0024345	0.0492802
	11	0.0000258	0.0050789	0.0000123	0.0035140
	12	0.0000003	0.0005812	0.0000001	0.0002953
7.600	0	0.9991920	-0.0284114	0.9247870	0.2637350
	1	0.8805310	0.3243400	0.9991920	-0.0284114
	2	0.9973990	0.0509313	0.8256590	0.3794030
	3	0.6720560	0.4694640	0.9860400	0.1173250
	4	0.8034140	0.3974160	0.4539920	0.4978790
	5	0.4311430	0.4952360	0.5674020	0.4954360
	6	0.0638491	0.2444840	0.4627140	0.4904440
	7	0.0104297	-0.1015920	0.1589050	-0.3655880
	8	0.1603970	-0.3671590	0.1446910	-0.3517890
	9	0.7487320	0.4337420	0.1625490	-0.3689540
	10	0.0030102	0.0547824	0.0054751	0.0737910
	11	0.0000428	0.0065397	0.0000231	0.0048079
	12	0.0000006	0.0007622	0.0000002	0.0004057



NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
7.700	0	0.9858580	-0.1180770	0.9315700	0.2524830
	1	0.8929870	0.3091300	0.9858580	-0.1180770
	2	0.9998340	-0.0128832	0.8444410	0.3624370
	3	0.7281760	0.4449000	0.9939630	0.0774602
	4	0.8250320	0.3799400	0.5542030	0.4970530
	5	0.5539350	0.4970830	0.5679620	0.4953600
	6	0.1019600	0.3025950	0.5536590	0.4971120
	7	0.0014639	-0.0382329	0.1204110	-0.3254410
	8	0.1238150	-0.3293700	0.1446560	-0.3517540
	9	0.9852430	-0.1205790	0.1266750	-0.3326080
	10	0.0052030	0.0719440	0.0136732	0.1161300
	11	0.0000707	0.0084082	0.0000435	0.0065929
	12	0.0000010	0.0009957	0.0000003	0.0005558
	13	0.0000000	0.0001045	0.	0.
7.800	0	0.9670220	-0.1785780	0.9437030	0.2304950
	1	0.9130000	0.2818340	0.9670220	-0.1785780
	2	0.9968480	-0.0560518	0.8737610	0.3321180
	3	0.7985860	0.4010570	0.9971320	0.0534736
	4	0.8413750	0.3653260	0.6842360	0.4648190
	5	0.6690790	0.4705450	0.5682400	0.4953210
	6	0.1514810	0.3585170	0.6561520	0.4749910
	7	0.0008008	0.0282866	0.0710988	-0.2569900
	8	0.0933829	-0.2909680	0.1441710	-0.3512630
	9	0.6621810	-0.4729670	0.1087430	-0.3113170
	10	0.0092383	0.0956713	0.0411040	0.1985310
	11	0.0001167	0.0108018	0.0000824	0.0090762
	12	0.0000017	0.0012963	0.0000006	0.0007595
	13	0.0000000	0.0001393	0.	0.
7.900	0	0.9507370	-0.2164180	0.9614870	0.1924320
	1	0.9406120	0.2363490	0.9507370	-0.2164180
	2	0.9930050	-0.0833411	0.9134840	0.2811250
	3	0.8770890	0.3283350	0.9983290	0.0408455
	4	0.8547400	0.3523630	0.8242860	0.3805770
	5	0.7661180	0.4232980	0.5706860	0.4949780
	6	0.2142050	0.4102700	0.7205450	0.4487310
	7	0.0094422	0.0967112	0.0206273	-0.1421330
	8	0.0673837	-0.2506850	0.1424250	-0.3494860
	9	0.3998210	-0.4898610	0.0991696	-0.2988900
	10	0.0170689	0.1295280	0.1781320	0.3826240
	11	0.0001926	0.0138763	0.0001581	0.0125727
	12	0.0000028	0.0016821	0.0000011	0.0010360
	13	0.0000000	0.0001848	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
8.000	0	0.9395810	-0.2382610	0.9823900	0.1315310
	1	0.9719820	0.1650240	0.9395810	-0.2382610
	2	0.9900270	-0.0993657	0.9581430	0.2002630
	3	0.9486440	0.2207230	0.9987290	0.0356355
	4	0.8670610	0.3395080	0.9365070	0.2438480
	5	0.8407790	0.3658820	0.5779590	0.4938850
	6	0.2916070	0.4545020	0.7594740	0.4274030
	7	0.0281850	0.1655010	0.0013148	0.0362369
	8	0.0450031	-0.2073110	0.1384830	-0.3454060
	9	0.2614930	-0.4394480	0.0940499	-0.2918980
	10	0.0334793	0.1798850	0.9631070	0.1685000
	11	0.0003185	0.0178430	0.0003091	0.0175794
	12	0.0000047	0.0021763	0.0000020	0.0014113
	13	0.0000001	0.0002441	0.0000000	0.0001200
8.100	0	0.9333590	-0.2494000	0.9983000	0.0411931
	1	0.9962160	0.0613962	0.9333590	-0.2494000
	2	0.9881830	-0.1080610	0.9930790	0.0829028
	3	0.9928090	0.0844957	0.9988110	0.0344677
	4	0.8800410	0.3249130	0.9925220	0.0861523
	5	0.8943130	0.3074370	0.5931580	0.4912450
	6	0.3839120	0.4863370	0.7821170	0.4128080
	7	0.0575731	0.2329340	0.0731185	0.2603310
	8	0.0262167	-0.1597790	0.1312130	-0.3376330
	9	0.1842790	-0.3877110	0.0914952	-0.2883120
	10	0.0719954	0.2584800	0.4043090	-0.4907580
	11	0.0005290	0.0229936	0.0006215	0.0249212
	12	0.0000079	0.0028085	0.0000037	0.0019214
	13	0.0000001	0.0003212	0.0000000	0.0001648
8.200	0	0.9307750	-0.2538360	0.9936240	-0.0795951
	1	0.9947320	-0.0723915	0.9307750	-0.2538360
	2	0.9871150	-0.1127770	0.9957780	-0.0648415
	3	0.9965070	-0.0590025	0.9988210	0.0343114
	4	0.8951800	0.3063210	0.9971220	-0.0535656
	5	0.9308450	0.2537170	0.6200040	0.4853850
	6	0.4888580	0.4998760	0.7944100	0.4041320
	7	0.0979099	0.2971930	0.2658380	0.4417780
	8	0.0116374	-0.1072470	0.1192570	-0.3240910
	9	0.1360660	-0.3428590	0.0904401	-0.2868110
	10	0.1783150	0.3827780	0.1686740	-0.3744630
	11	0.0008854	0.0297427	0.0013021	0.0360615
	12	0.0000131	0.0036165	0.0000068	0.0026166
	13	0.0000002	0.0004212	0.0000000	0.0002257

# NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
8.600	0	0.9246140	-0.2640130	0.6365260	-0.4810000
	1	0.6606640	-0.4734840	0.9246140	-0.2640130
	2	0.9763290	-0.1520220	0.6828530	-0.4653650
	3	0.8178660	-0.3859550	0.9996270	-0.0193129
	4	0.9848590	0.1221140	0.9044270	-0.2940040
	5	0.9881310	0.1082960	0.9017620	0.2976360
	6	0.8867070	0.3169500	0.8027970	0.3978870
	7	0.3681940	0.4823140	0.8739680	0.3318850
	8	0.0246142	0.1549460	0.0105578	-0.1022070
	9	0.0398474	-0.1956010	0.0887423	-0.2843710
	10	0.3015620	-0.4589360	0.0604062	-0.2382380
	11	0.0024292	0.0914231	0.0940738	0.2919310
	12	0.0000966	0.0098289	0.0000856	0.0092542
	13	0.0000014	0.0012033	0.0000006	0.0007759
	14	0.0000000	0.0001350	0.	0.
8.700	0	0.9150920	-0.2787450	0.5459660	-0.4978830
	1	0.5835220	-0.4929750	0.9150920	-0.2787450
	2	0.9653010	-0.1830170	0.6181010	-0.4858520
	3	0.7843590	-0.4112660	0.9956500	-0.0658078
	4	0.9992920	0.0265963	0.8941310	-0.3076690
	5	0.9929380	0.0837390	0.9772950	0.1489620
	6	0.9422980	0.2331790	0.8051410	0.3960920
	7	0.4603410	0.4984250	0.9099980	0.2861850
	8	0.0551486	0.2282700	0.0031022	0.0556106
	9	0.0252460	-0.1568720	0.0861761	-0.2806240
	10	0.1789940	-0.3833480	0.0570217	-0.2318840
	11	0.0164668	0.1272620	0.8377050	0.3687210
	12	0.0001595	0.0126280	0.0001667	0.0129109
	13	0.0000024	0.0015533	0.0000011	0.0010528
	14	0.0000000	0.0001776	0.	0.
8.800	0	0.8967570	-0.3042760	0.4812590	-0.4996490
	1	0.5294030	-0.4991350	0.8967570	-0.3042760
	2	0.9443530	-0.2292380	0.5742620	-0.4944540
	3	0.7609910	-0.4264780	0.9814750	-0.1348390
	4	0.9916680	-0.0908963	0.8891070	-0.3140000
	5	0.9963770	0.0600789	0.9987980	-0.0346455
	6	0.9767120	0.1508150	0.8114700	0.3911340
	7	0.5588380	0.4965260	0.9296970	0.2556560
	8	0.0998411	0.2997880	0.0772480	0.2669850
	9	0.0132434	-0.1143150	0.0814138	-0.2734700
	10	0.1195010	-0.3243770	0.0553420	-0.2286470
	11	0.0353497	0.1846620	0.3124390	-0.4634880
	12	0.0002645	0.0162613	0.0003337	0.0182655
	13	0.0000040	0.0020007	0.0000020	0.0014284
	14	0.0000001	0.0002327	0.0000000	0.0001255

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
9.200	0	0.5951190	-0.4908690	0.3957010	-0.4890010
	1	0.4606420	-0.4984490	0.5951190	-0.4908690
	2	0.5969640	-0.4905080	0.5250290	-0.4993730
	3	0.7225850	-0.4477230	0.5988670	-0.4901280
	4	0.6647180	-0.4720890	0.8841600	-0.3200330
	5	0.9945910	-0.0733491	0.7145440	-0.4516310
	6	0.9917500	-0.0904556	0.9189420	0.2729240
	7	0.9146310	0.2794290	0.9485930	0.2208270
	8	0.4127220	0.4923240	0.9094890	0.2869120
	9	0.0130863	0.1136440	0.0243501	-0.1541340
	10	0.0333064	-0.1794350	0.0542721	-0.2265540
	11	0.5328350	-0.4989210	0.0395910	-0.1949960
	12	0.0022707	0.0475983	0.0112579	0.1055040
	13	0.0000295	0.0054275	0.0000243	0.0049276
	14	0.0000004	0.0006653	0.0000002	0.0004269
9.300	0	0.4436700	-0.4968170	0.3945430	-0.4887520
	1	0.4595620	-0.4983620	0.4436700	-0.4968170
	2	0.4459640	-0.4970720	0.5249010	-0.4993800
	3	0.7139640	-0.4519060	0.4481820	-0.4973080
	4	0.5724620	-0.4947210	0.8772020	-0.3282050
	5	0.9829140	-0.1295910	0.6639010	-0.4723730
	6	0.9831180	-0.1288280	0.9653380	0.1829220
	7	0.9642950	0.1855530	0.9486400	0.2207300
	8	0.5132010	0.4998260	0.9633250	0.1879640
	9	0.0357877	0.1857600	0.0046469	-0.0680097
	10	0.0225000	-0.1483030	0.0535501	-0.2251280
	11	0.2162330	-0.4116750	0.0355889	-0.1852630
	12	0.0041638	0.0643929	0.0494963	0.2169020
	13	0.0000484	0.0069601	0.0000462	0.0067975
	14	0.0000007	0.0008592	0.0000003	0.0005777
9.400	0	0.2954390	-0.4562400	0.3943650	-0.4887140
	1	0.4581730	-0.4982470	0.2954390	-0.4562400
	2	0.3118590	-0.4632520	0.5231540	-0.4994640
	3	0.7002400	-0.4581530	0.3270940	-0.4691520
	4	0.4996670	-0.5000000	0.8630040	-0.3438430
	5	0.9587020	-0.1989780	0.6310230	-0.4825280
	6	0.9731350	-0.1616900	0.9976690	0.0482199
	7	0.9920310	0.0889102	0.9490340	0.2199280
	8	0.6150020	0.4865950	0.9856920	0.1187560
	9	0.0734708	0.2609080	0.0046528	0.0680528
	10	0.0134442	-0.1151670	0.0518905	-0.2218060
	11	0.1163060	-0.3205920	0.0334959	-0.1799280
	12	0.0080891	0.0895751	0.6423530	0.4793080
	13	0.0000799	0.0089346	0.0000897	0.0094696
	14	0.0000012	0.0011069	0.0000006	0.0007814
	15	0.0000000	0.0001286	0.	0.

# NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
9.800	0	0.0353760	-0.1847280	0.3383260	-0.4731400
	1	0.3815530	-0.4857680	0.0353760	-0.1847280
	2	0.0822929	-0.2748100	0.4282400	-0.4948240
	3	0.5124380	-0.4998450	0.1391880	-0.3461430
	4	0.3648690	-0.4813930	0.6140330	-0.4868230
	5	0.6143030	-0.4867590	0.5976390	-0.4903740
	6	0.9168040	-0.2761780	0.6145800	-0.4866940
	7	0.9494700	-0.2190360	0.9730310	0.1619940
	8	0.9399810	0.2375220	0.9995130	0.0220562
	9	0.4026590	0.4904330	0.8545650	0.3525390
	10	0.0041787	0.0645080	0.0256709	-0.1581510
	11	0.0265555	-0.1607800	0.0319382	-0.1758360
	12	0.7979860	0.4015020	0.0272997	-0.1629550
	13	0.0006410	0.0253103	0.0020316	0.0450270
	14	0.0000090	0.0030018	0.0000070	0.0026448
	15	0.0000001	0.0003679	0.0000001	0.0002351
9.900	0	0.0235525	-0.1516560	0.2920560	-0.4547080
	1	0.3248790	-0.4683300	0.0235525	-0.1516500
	2	0.0691715	-0.2537460	0.3607210	-0.4802100
	3	0.4098160	-0.4918000	0.1299850	-0.3362870
	4	0.3523120	-0.4776910	0.4694240	-0.4990640
	5	0.4830810	-0.4997140	0.5973420	-0.4904330
	6	0.8929810	-0.3091370	0.4950570	-0.4999760
	7	0.9217390	-0.2685830	0.9867170	0.1144850
	8	0.9796360	0.1412440	0.9996430	0.0189045
	9	0.5177210	0.4996860	0.9675600	0.1771660
	10	0.0162676	0.1265030	0.0128716	-0.1127200
	11	0.0186145	-0.1351590	0.0318109	-0.1754960
	12	0.4632960	-0.4986510	0.0226609	-0.1488200
	13	0.0011294	0.0335874	0.0059989	0.0772200
	14	0.0000148	0.0038451	0.0000131	0.0036123
	15	0.0000002	0.0004751	0.0000001	0.0003173
10.000	0	0.0178285	-0.1323280	0.2270370	-0.4189170
	1	0.2476880	-0.4316690	0.0178285	-0.1323280
	2	0.0622887	-0.2416790	0.2702680	-0.4440980
	3	0.2881010	-0.4528790	0.1262020	-0.3320770
	4	0.3419760	-0.4743720	0.3086060	-0.4619180
	5	0.3651390	-0.4814690	0.5946830	-0.4909530
	6	0.8606660	-0.3462940	0.4165170	-0.4919280
	7	0.8929800	-0.3091380	0.9983540	0.0405393
	8	0.9982630	0.0416374	0.9996660	0.0182832
	9	0.6330320	0.4819780	0.9981650	0.0428023
	10	0.0399270	0.1957880	0.0016190	-0.0402044
	11	0.0121124	-0.1093880	0.0313422	-0.1742410
	12	0.1457040	-0.3528100	0.0203074	-0.1410500
	13	0.0020648	0.0453929	0.0265528	0.1607720
	14	0.0000243	0.0049282	0.0000249	0.0049858
	15	0.0000004	0.0006125	0.0000002	0.0004282

## REFRACTIVE INDEX M= 1.600

NOLTR 62-161

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
10.400	0	0.0142435	-0.1184930	0.0018039	0.0424337
	1	0.0014751	0.0383787	0.0142435	-0.1184930
	2	0.0539248	-0.2258690	0.0011875	0.0344397
	3	0.0006993	-0.0264343	0.1193670	-0.3242200
	4	0.2695940	-0.4437490	0.0060565	-0.0775876
	5	0.1234400	-0.3289410	0.4915810	-0.4999290
	6	0.5673840	-0.4954390	0.2922180	-0.4547820
	7	0.7766840	-0.4164690	0.6717810	-0.4695650
	8	0.9061380	-0.2916370	1.0000000	-0.0006557
	9	0.9605490	0.1946660	0.9761380	-0.1526200
	10	0.3306930	0.4704630	0.6021900	0.4894460
	11	0.0005677	0.0238194	0.0203712	-0.1412660
	12	0.0206272	-0.1421330	0.0182119	-0.1337170
	13	0.0719610	0.2584230	0.0209227	-0.1431260
	14	0.0001865	0.0136571	0.0004441	0.0210692
	15	0.0000028	0.0016616	0.0000020	0.0014275
	16	0.0000000	0.0002033	0.0000000	0.0001295
10.500	0	0.0133147	-0.1146190	0.0321527	0.1764060
	1	0.0276152	0.1638680	0.0133147	-0.1146190
	2	0.0490678	-0.2160100	0.0236050	0.1518150
	3	0.0034430	0.0585763	0.1094480	-0.3122000
	4	0.2303770	-0.4210740	0.0064421	-0.0210217
	5	0.1020650	-0.3027340	0.4188200	-0.4933660
	6	0.4457310	-0.4970460	0.2883040	-0.4529730
	7	0.7439510	-0.4364490	0.4794050	-0.4995760
	8	0.8605200	-0.3464460	0.9995170	-0.0219629
	9	0.9909320	0.0947922	0.9726880	-0.1629910
	10	0.4572360	0.4981680	0.8914840	0.3110310
	11	0.0051000	0.0712318	0.0139079	-0.1171090
	12	0.0145871	-0.1198930	0.0182056	-0.1336940
	13	0.5341410	0.4988330	0.0151473	-0.1221390
	14	0.0003204	0.0178955	0.0010940	0.0330583
	15	0.0000045	0.0021273	0.0000038	0.0019408
	16	0.0000001	0.0002627	0.0000000	0.0001744
10.600	0	0.0109493	-0.1040640	0.0823366	0.2748770
	1	0.0695471	0.2543820	0.0109493	-0.1040640
	2	0.0405776	-0.1973090	0.0583851	0.2344700
	3	0.0142732	0.1186150	0.0923008	-0.2894500
	4	0.1790240	-0.3833720	0.0002271	0.0150691
	5	0.0875756	-0.2826770	0.3189610	-0.4660740
	6	0.3202480	-0.4665720	0.2874960	-0.4525950
	7	0.7067430	-0.4552550	0.3216020	-0.4670910
	8	0.8129130	-0.3899820	0.9967190	-0.0571890
	9	0.9999710	-0.0053792	0.9710340	-0.1677120
	10	0.5922370	0.4914190	0.9939490	0.0775538
	11	0.0163183	0.1266970	0.0062893	-0.0790554
	12	0.0099521	-0.0992627	0.0181182	-0.1333790
	13	0.3803820	-0.4854810	0.0125470	-0.1113090
	14	0.0005639	0.0237461	0.0032512	0.0569266
	15	0.0000074	0.0027237	0.0000070	0.0026529
	16	0.0000001	0.0003388	0.0000001	0.0002349

NOLTR 62-161

REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
11.000	0	0.0093472	0.0962282	0.2163680	0.4117680
	1	0.1758770	0.3807160	0.0093472	0.0962282
	2	0.0046529	0.0680531	0.1398970	0.3468800
	3	0.0445001	0.2062030	0.0013469	0.0366749
	4	0.0013370	0.0365408	0.0026116	0.0510371
	5	0.0541451	-0.2263040	0.0013271	0.0364052
	6	0.0281026	-0.1652660	0.2660990	-0.4419160
	7	0.4661520	-0.4988530	0.0916375	-0.2885140
	8	0.6304600	-0.4826800	0.7868290	-0.4095470
	9	0.8714940	-0.3346530	0.9692560	-0.1726240
	10	0.9712200	0.1671890	0.9134600	-0.2811600
	11	0.2182690	0.4130710	0.2180060	0.4128920
	12	0.0000091	-0.0030163	0.0139279	-0.1171920
	13	0.0160483	-0.1256610	0.0101296	-0.1001350
	14	0.0103165	0.1010450	0.0201460	-0.1405000
	15	0.0000554	0.0074409	0.0001077	0.0103757
	16	0.0000008	0.0009204	0.0000006	0.0007738
	17	0.0000000	0.0001125	0.	0.
11.100	0	0.0438121	0.2046770	0.2245650	0.4172950
	1	0.1817430	0.3856330	0.0438121	0.2046770
	2	0.0397523	0.1953770	0.1433480	0.3504270
	3	0.0467637	0.2111320	0.0356285	0.1853620
	4	0.0316904	0.1751750	0.0026481	0.0513912
	5	0.0447787	-0.2068180	0.0283087	0.1658530
	6	0.0102583	-0.1007630	0.2426990	-0.4287150
	7	0.3745800	-0.4840140	0.0801818	-0.2715740
	8	0.5872590	-0.4923270	0.6020940	-0.4894660
	9	0.8143490	-0.3888240	0.9666170	-0.1796340
	10	0.9967610	0.0568238	0.8994740	-0.3007000
	11	0.3346560	0.4718700	0.5687670	0.4952490
	12	0.0009385	0.0306201	0.0110202	-0.1043970
	13	0.0110966	-0.1047540	0.0101052	-0.1000150
	14	0.0352213	0.1843390	0.0111812	-0.1051480
	15	0.0000935	0.0096687	0.0002400	0.0154891
	16	0.0000014	0.0011780	0.0000011	0.0010469
	17	0.0000000	0.0001454	0.	0.

REFRACTIVE INDEX  $M = 1.600$ 

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
11.800	0	0.7138580	0.4519570	0.2930550	0.4551630
	1	0.2617180	0.4395700	0.7138580	0.4519570
	2	0.6329500	0.4820000	0.2301050	0.4209000
	3	0.1751250	0.3800740	0.5550520	0.4969600
	4	0.3441980	0.4751060	0.1184830	0.3231790
	5	0.1147850	0.3187620	0.1771220	0.3817720
	6	0.0106346	0.1025740	0.1108300	0.3139210
	7	0.0132188	0.1142100	0.0606666	-0.2387180
	8	0.1981310	-0.3985920	0.0008993	-0.0299745
	9	0.4100020	-0.4918340	0.5401580	-0.4983850
	10	0.7105430	-0.4535100	0.8807790	-0.3240490
	11	0.9943630	-0.0748662	0.7913600	-0.4063370
	12	0.3094110	0.4622510	0.5041630	0.4999830
	13	0.0010697	0.0326891	0.0057208	-0.0754192
	14	0.0057308	-0.0754851	0.0054651	-0.0737238
	15	0.0177032	0.1318700	0.0057414	-0.0755542
	16	0.0000470	0.0068524	0.0001305	0.0114247
	17	0.0000007	0.0008348	0.0000006	0.0007665
	18	0.0000000	0.0001037	0.	0.
12.000	0	0.7541360	0.4305980	0.4298690	0.4950570
	1	0.4131810	0.4924050	0.7541360	0.4305980
	2	0.6644580	0.4721800	0.3957750	0.4890160
	3	0.3811950	0.4856800	0.5729200	0.4946540
	4	0.3615340	0.4804450	0.3652980	0.4815140
	5	0.3361620	0.4730840	0.1781570	0.3826450
	6	0.0246500	0.1550560	0.3155090	0.4647180
	7	0.0566006	0.2310780	0.0325006	-0.1773250
	8	0.0654668	-0.2473480	0.0000031	-0.0017532
	9	0.3109900	-0.4628990	0.1345850	-0.3412800
	10	0.5731120	-0.4946260	0.8613580	-0.3455720
	11	0.9221840	-0.2678810	0.7713070	-0.4199910
	12	0.6409770	0.4797140	0.9955450	-0.0665956
	13	0.0113182	0.1057830	0.0010962	-0.0330911
	14	0.0024879	-0.0498169	0.0054184	-0.0734100
	15	0.1748470	-0.3798360	0.0035108	-0.0591477
	16	0.0001424	0.0119322	0.0010134	0.0318177
	17	0.0000019	0.0013664	0.0000020	0.0014219
	18	0.0000000	0.0001717	0.0000000	0.0001275



## REFRACTIVE INDEX M= 1.600

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
12.200	0	0.7620660	0.4258190	0.6798920	0.4665180
	1	0.6788170	0.4669310	0.7620660	0.4258190
	2	0.6712440	0.4697610	0.6777240	0.4673480
	3	0.6734810	0.4689390	0.5742120	0.4944620
	4	0.3791500	0.4851750	0.6694390	0.4704150
	5	0.5422840	0.4982090	0.1920480	0.3939100
	6	0.0622070	0.2415310	0.4426730	0.4967030
	7	0.0985424	0.2980470	0.0004925	-0.0221868
	8	0.0005339	-0.0231008	0.0000072	0.0026744
	9	0.2132050	-0.4095710	0.0005790	-0.0240560
	10	0.4404790	-0.4964450	0.8013390	-0.3989920
	11	0.8061960	-0.3952770	0.7673450	-0.4225240
	12	0.9314790	0.2526380	0.8119040	-0.3907890
	13	0.0480904	0.2139570	0.0050899	0.0711618
	14	0.0005585	-0.0236270	0.0050301	-0.0707444
	15	0.0117451	-0.1077360	0.0029932	-0.0546286
	16	0.0005038	0.0224401	0.3806160	0.4855380
	17	0.0000050	0.0022460	0.0000075	0.0027308
	18	0.0000001	0.0002825	0.0000001	0.0002293
12.400	0	0.7633840	0.4250040	0.9141660	0.2801190
	1	0.9109120	0.2848700	0.7633840	0.4250040
	2	0.6784710	0.4670630	0.9077070	0.2894390
	3	0.8744070	0.3313900	0.5840630	0.4928830
	4	0.4214210	0.4937870	0.8420370	0.3647060
	5	0.6599730	0.4737180	0.2450140	0.4300950
	6	0.1619230	0.3683800	0.4942840	0.4999670
	7	0.1326260	0.3391700	0.0716943	0.2579810
	8	0.0411444	0.1986240	0.0000247	0.0049703
	9	0.1156560	-0.3198120	0.0240829	0.1533070
	10	0.3204360	-0.4666440	0.6347190	-0.4815090
	11	0.6725830	-0.4692710	0.7666880	-0.4229390
	12	0.9960170	-0.0629891	0.6981500	-0.4590600
	13	0.1554890	0.3623710	0.1275950	0.3336390
	14	0.0000994	0.0099703	0.0038556	-0.0619739
	15	0.0042502	-0.0650548	0.0028885	-0.0536671
	16	0.0026427	0.0513396	0.0048934	-0.0697818
	17	0.0000140	0.0037373	0.0000316	0.0056178
	18	0.0000002	0.0004626	0.0000002	0.0004148

REFRACTIVE INDEX  $M = 1.600$ 

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
12.600	0	0.7801450	0.4141480	0.9952410	0.0688222
	1	0.9914810	0.0919051	0.7801450	0.4141480
	2	0.7105120	0.4535250	0.9868980	0.1137110
	3	0.9523500	0.2130250	0.6299050	0.4828300
	4	0.5202240	0.4995910	0.9060270	0.2917910
	5	0.7152440	0.4512980	0.3857200	0.4867650
	6	0.3706670	0.4829830	0.5068280	0.4999530
	7	0.1661080	0.3721780	0.3534310	0.4780350
	8	0.1416950	0.3487370	0.0006664	0.0258054
	9	0.0320560	-0.1761490	0.0524165	0.2228650
	10	0.2157320	-0.4113290	0.2759660	-0.4470000
	11	0.5330730	-0.4989050	0.7580030	-0.4282930
	12	0.9065800	-0.2910210	0.6533230	-0.4759120
	13	0.4160630	0.4929040	0.8715050	0.3346400
	14	0.0034031	0.0582368	0.0015817	-0.0397393
	15	0.0018844	-0.0433683	0.0028808	-0.0535955
	16	0.1023430	0.3030990	0.0021151	-0.0459417
	17	0.0000407	0.0063821	0.0001829	0.0135235
	18	0.0000006	0.0007563	0.0000006	0.0007611
12.800	0	0.8353780	0.3708390	0.9975260	-0.0496768
	1	0.9998390	-0.0126711	0.8353780	0.3708390
	2	0.7931630	0.4050380	0.9994740	0.0229296
	3	0.9756530	0.1541230	0.7427880	0.4370970
	4	0.7035980	0.4566710	0.9246700	0.2639230
	5	0.7404040	0.4384130	0.6551170	0.4753300
	6	0.6391080	0.4802590	0.5077520	0.4999400
	7	0.2131810	0.4095540	0.6250420	0.4841120
	8	0.2415290	0.4280100	0.0087394	0.0930756
	9	0.0006457	0.0254025	0.0636879	0.2441960
	10	0.1263530	-0.3322470	0.0060457	-0.0775185
	11	0.3959280	-0.4890490	0.7250180	-0.4465050
	12	0.7722540	-0.4193780	0.6396470	-0.4801030
	13	0.8093290	0.3928300	0.8500750	-0.3569980
	14	0.0176070	0.1315180	0.0001830	0.0135249
	15	0.0006019	-0.0245259	0.0027727	-0.0525834
	16	0.0137809	-0.1165800	0.0016179	-0.0401911
	17	0.0001322	0.0114982	0.0032795	0.0571728
	18	0.0000015	0.0012397	0.0000021	0.0014343
	19	0.0000000	0.0001564	0.0000000	0.0001251

Table 4

Real and Imaginary Parts of the Scattering Coefficients  
 $A(N)$  and  $B(N)$  for the Isotropic, Dielectric, Infinite  
 Circular Cylinder. Refractive Index  $m = 2.000$ .  
 Range of Circumference to Wavelength Ratio,  $x = \pi a/\lambda$ ;

0.100	(0.060)	5.680
6.000	(0.200)	8.000
8.200	(0.400)	10.200

## REFRACTIVE INDEX M= 2.000

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
0.100	0	0.	0.	0.	0.0244656
	1	0.	0.	0.	0.
0.160	0	0.0000000	0.0001947	0.0042609	0.0651364
	1	0.0001486	0.0121896	0.0000000	0.0001947
0.220	0	0.0000005	0.0007020	0.0166648	0.1280120
	1	0.0005361	0.0231469	0.0000005	0.0007020
	2	0.0000000	0.0001376	0.	0.
0.280	0	0.0000035	0.0018639	0.0474229	0.2125420
	1	0.0014160	0.0376027	0.0000035	0.0018639
	2	0.0000001	0.0003604	0.	0.
0.340	0	0.0000169	0.0041159	0.1085290	0.3110470
	1	0.0030871	0.0554759	0.0000169	0.0041159
	2	0.0000006	0.0007819	0.	0.
0.400	0	0.0000647	0.0080424	0.2075870	0.4055790
	1	0.0059003	0.0765868	0.0000647	0.0080424
	2	0.0000022	0.0014946	0.	0.
0.460	0	0.0002079	0.0144166	0.3380160	0.4730340
	1	0.0102327	0.1006380	0.0002079	0.0144166
	2	0.0000068	0.0026080	0.0000060	0.0001181
0.520	0	0.0005888	0.0242585	0.4778760	0.4995100
	1	0.0164523	0.1272070	0.0005888	0.0242585
	2	0.0000180	0.0042484	0.0000001	0.0002477
0.580	0	0.0015169	0.0389174	0.6031560	0.4892430
	1	0.0248784	0.1557550	0.0015169	0.0389174
	2	0.0000430	0.0065590	0.0000002	0.0004801
0.640	0	0.0036349	0.0601804	0.7011100	0.4577710
	1	0.0357438	0.1856510	0.0036349	0.0601804
	2	0.0000941	0.0096994	0.0000008	0.0008735
	3	0.0000000	0.0001630	0.	0.
0.700	0	0.0082383	0.0903907	0.7711510	0.4200920
	1	0.0491685	0.2162200	0.0082383	0.0903907
	2	0.0001917	0.0138460	0.0000023	0.0015096
	3	0.0000001	0.0002773	0.	0.
0.760	0	0.0178760	0.1325010	0.8186420	0.3853150
	1	0.0651531	0.2467960	0.0178760	0.1325010
	2	0.0003684	0.0191909	0.0000063	0.0025008
	3	0.0000002	0.0004512	0.	0.
0.820	0	0.0374283	0.1898090	0.8498230	0.3572450
	1	0.0835957	0.2767810	0.0374283	0.1898090
	2	0.0006734	0.0259419	0.0000160	0.0039995
	3	0.0000005	0.0007068	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
0.880	0	0.0757986	0.2646760	0.8697640	0.3365620
	1	0.1043330	0.3056920	0.0757987	0.2646760
	2	0.0011793	0.0343211	0.0000386	0.0062103
	3	0.0000011	0.0010718	0.	0.
0.940	0	0.1475650	0.3546680	0.8820830	0.3225100
	1	0.1271970	0.3331940	0.1475650	0.3546680
	2	0.0019898	0.0445625	0.0000885	0.0094068
	3	0.0000025	0.0015801	0.0000000	0.0001576
1.000	0	0.2709110	0.4444300	0.8892540	0.3138170
	1	0.1520880	0.3591070	0.2709110	0.4444300
	2	0.0032492	0.0569087	0.0001948	0.0139559
	3	0.0000052	0.0022727	0.0000001	0.0002595
1.060	0	0.4532790	0.4978120	0.8929890	0.3091270
	1	0.1790440	0.3833890	0.4532790	0.4978120
	2	0.0051538	0.0716051	0.0004143	0.0203509
	3	0.0000102	0.0031986	0.0000002	0.0004154
1.120	0	0.6656240	0.4717720	0.8945390	0.3071470
	1	0.2083140	0.4061030	0.6656240	0.4717720
	2	0.0079650	0.0888906	0.0008569	0.0292609
	3	0.0000195	0.0044155	0.0000004	0.0006487
	4	0.0000000	0.0001150	0.	0.
1.180	0	0.8458370	0.3611050	0.8948970	0.3066860
	1	0.2404310	0.4273460	0.8458370	0.3611050
	2	0.0120223	0.1089850	0.0017338	0.0416034
	3	0.0000359	0.0059914	0.0000010	0.0009913
	4	0.0000000	0.0001729	0.	0.
1.240	0	0.9530010	0.2116370	0.8949380	0.3066330
	1	0.2762920	0.4471630	0.9530010	0.2116370
	2	0.0177582	0.1320710	0.0034519	0.0586511
	3	0.0000641	0.0080051	0.0000022	0.0014857
	4	0.0000001	0.0002545	0.	0.
1.300	0	0.9946930	0.0726557	0.8955110	0.3058940
	1	0.3172370	0.4654010	0.9946930	0.0726557
	2	0.0257106	0.1582700	0.0068011	0.0821878
	3	0.0001113	0.0105482	0.0000048	0.0021890
	4	0.0000001	0.0003674	0.	0.
1.360	0	0.9987710	-0.0350379	0.8974860	0.3033230
	1	0.3651450	0.4814710	0.9987710	-0.0350379
	2	0.0365325	0.1876110	0.0133384	0.1147190
	3	0.0001884	0.0137260	0.0000101	0.0031766
	4	0.0000003	0.0005214	0.	0.

## NOLTR 62-161

## REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
1.420	0	0.9874020	-0.1115340	0.9017890	0.2975990
	1	0.4224720	0.4939530	0.9874020	-0.1115340
	2	0.0509960	0.2199900	0.0261875	0.1596930
	3	0.0003120	0.0176599	0.0000207	0.0045488
	4	0.0000005	0.0007284	0.0000000	0.0001046
1.480	0	0.9724490	-0.1636830	0.9093770	0.2870720
	1	0.4921390	0.4999380	0.9724490	-0.1636830
	2	0.0699875	0.2551260	0.0517164	0.2214540
	3	0.0005060	0.0224889	0.0000414	0.0064383
	4	0.0000010	0.0010028	0.0000000	0.0001584
1.540	0	0.9589600	-0.1983820	0.9211400	0.2695210
	1	0.5769440	0.4940440	0.9589600	-0.1983820
	2	0.0944919	0.2925120	0.1028710	0.3037900
	3	0.0008056	0.0283720	0.0000814	0.0090220
	4	0.0000019	0.0013624	0.0000001	0.0002361
1.600	0	0.9485570	-0.2208990	0.9376220	0.2418410
	1	0.6778760	0.4672960	0.9485570	-0.2208990
	2	0.1255640	0.3313580	0.2042670	0.4031650
	3	0.0012612	0.0354913	0.0001572	0.0125363
	4	0.0000033	0.0018283	0.0000001	0.0003469
1.660	0	0.9413590	-0.2349520	0.9583980	0.1996770
	1	0.7904910	0.4069580	0.9413590	-0.2349520
	2	0.1642860	0.3705350	0.3910290	0.4879810
	3	0.0019446	0.0440548	0.0002994	0.0173007
	4	0.0000059	0.0024260	0.0000002	0.0005031
1.720	0	0.9368970	-0.2431480	0.9807850	0.1372790
	1	0.8997430	0.3003430	0.9368970	-0.2431480
	2	0.2117110	0.4085210	0.6661010	0.4716040
	3	0.0029572	0.0542996	0.0005645	0.0237522
	4	0.0000101	0.0031856	0.0000005	0.0007208
	5	0.0000000	0.0001187	0.	0.
1.780	0	0.9345200	-0.2473710	0.9976550	0.0483665
	1	0.9783890	0.1454110	0.9345200	-0.2473710
	2	0.2687910	0.4433310	0.9146760	0.2793630
	3	0.0044414	0.0664958	0.0010572	0.0324976
	4	0.0000172	0.0041430	0.0000010	0.0010216
	5	0.0000000	0.0001650	0.	0.
1.840	0	0.9335530	-0.2490610	0.9950350	-0.0702898
	1	0.9986050	-0.0373228	0.9335530	-0.2490610
	2	0.3362800	0.4724360	0.9999740	0.0051364
	3	0.0065964	0.0809499	0.0019749	0.0443959
	4	0.0000285	0.0053401	0.0000020	0.0014335
	5	0.0000000	0.0002268	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
1.900	0	0.9333540	-0.2494080	0.9531940	-0.2112230
	1	0.9538090	-0.2098970	0.9333540	-0.2494080
	2	0.4145810	0.4926500	0.9544530	-0.2085010
	3	0.0096994	0.0980069	0.0036969	0.0606899
	4	0.0000466	0.0068266	0.0000040	0.0019935
	5	0.0000001	0.0003084	0.	0.
1.960	0	0.9333130	-0.2494800	0.8576540	-0.3494050
	1	0.8650200	-0.3417020	0.9333130	-0.2494800
	2	0.5034900	0.4999880	0.8713680	-0.3347920
	3	0.0141359	0.1180510	0.0069742	0.0832199
	4	0.0000750	0.0086605	0.0000076	0.0027501
	5	0.0000002	0.0004150	0.	0.
2.020	0	0.9328270	-0.2503210	0.7167480	-0.4505780
	1	0.7625210	-0.4255380	0.9328270	-0.2503210
	2	0.6017280	0.4895420	0.7960310	-0.4029460
	3	0.0204405	0.1415010	0.0133509	0.1147720
	4	0.0001190	0.0109101	0.0000142	0.0037672
	5	0.0000003	0.0005533	0.0000000	0.0001148
2.080	0	0.9312500	-0.2530280	0.5623950	-0.4960920
	1	0.6675350	-0.4710970	0.9312500	-0.2530280
	2	0.7061520	0.4555230	0.7385860	-0.4394050
	3	0.0293545	0.1687980	0.0261593	0.1596090
	4	0.0001865	0.0136551	0.0000263	0.0051288
	5	0.0000005	0.0007310	0.0000000	0.0001632
2.140	0	0.9278050	-0.2588110	0.4264980	-0.4945680
	1	0.5888540	-0.4920420	0.9278050	-0.2588110
	2	0.8105940	0.3918310	0.6976020	-0.4592970
	3	0.0419042	0.2003700	0.0530021	0.2240380
	4	0.0002887	0.0169893	0.0000482	0.0069464
	5	0.0000009	0.0009577	0.0000001	0.0002298
2.200	0	0.9214440	-0.2690450	0.3229740	-0.4676130
	1	0.5274700	-0.4992450	0.9214440	-0.2690450
	2	0.9046280	0.2937270	0.6694450	-0.4704130
	3	0.0595072	0.2365720	0.1121280	0.3155230
	4	0.0004422	0.0210230	0.0000878	0.0093695
	5	0.0000015	0.0012448	0.0000001	0.0003209
2.260	0	0.9106230	-0.2852870	0.2504850	-0.4332930
	1	0.4811460	-0.4996440	0.9106230	-0.2852870
	2	0.9733330	0.1611070	0.6507900	-0.4767200
	3	0.0841112	0.2775540	0.2469420	0.4312330
	4	0.0006705	0.0258863	0.0001588	0.0125997
	5	0.0000026	0.0016060	0.0000002	0.0004444

## REFRACTIVE INDEX M= 2.000

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.320	0	0.8929360	-0.3091940	0.2019490	-0.4014540
	1	0.4468880	-0.4971710	0.8929360	-0.3091940
	2	0.9999930	0.0026313	0.6390340	-0.4802810
	3	0.1183600	0.3230340	0.5316840	0.4989950
	4	0.0010080	0.0317332	0.0002862	0.0169140
	5	0.0000042	0.0020575	0.0000004	0.0006109
2.380	0	0.8645540	-0.3422000	0.1702690	-0.3758690
	1	0.4219080	-0.4938640	0.8645540	-0.3422000
	2	0.9728680	-0.1624680	0.6321920	-0.4822090
	3	0.1657570	0.3718620	0.9031960	0.2956900
	4	0.0015036	0.0387473	0.0005155	0.0226986
	5	0.0000069	0.0026188	0.0000007	0.0008342
2.440	0	0.8194990	-0.3846040	0.1500520	-0.3571220
	1	0.4038810	-0.4906740	0.8194990	-0.3846040
	2	0.8929840	-0.3091340	0.6287310	-0.4831440
	3	0.2307090	0.4212860	0.9822820	-0.1319240
	4	0.0022279	0.0471482	0.0004314	0.0305046
	5	0.0000110	0.0033128	0.0000013	0.0011323
2.500	0	0.7491970	-0.4334750	0.1375770	-0.3444560
	1	0.3909170	-0.4879560	0.7491970	-0.4334750
	2	0.7758730	-0.4170060	0.6274150	-0.4834930
	3	0.3181840	0.4657710	0.8114950	-0.3911150
	4	0.0032827	0.0572010	0.0016953	0.0411395
	5	0.0000174	0.0041665	0.0000023	0.0015283
2.560	0	0.6438570	-0.4788580	0.1303320	-0.3366680
	1	0.3814660	-0.4857470	0.6438570	-0.4788580
	2	0.6442670	-0.4787350	0.6271870	-0.4835530
	3	0.4323560	0.4954030	0.6446920	-0.4786070
	4	0.0048156	0.0692273	0.0031262	0.0558248
	5	0.0000272	0.0052123	0.0000042	0.0020527
2.620	0	0.4989800	-0.4999990	0.1265780	-0.3325000
	1	0.3742090	-0.4839180	0.4989800	-0.4999990
	2	0.5179420	-0.4996780	0.6270830	-0.4835800
	3	0.5732510	0.4946050	0.5330840	-0.4989040
	4	0.0070421	0.0836211	0.0058838	0.0764800
	5	0.0000421	0.0064878	0.0000075	0.0027453
2.680	0	0.3280620	-0.4695070	0.1250410	-0.3307660
	1	0.3679580	-0.4822500	0.3280620	-0.4695070
	2	0.4083850	-0.4915350	0.6261470	-0.4838250
	3	0.7307840	0.4435520	0.4625020	-0.4985920
	4	0.0102799	0.1008670	0.0114206	0.1062550
	5	0.0000446	0.0080382	0.0000134	0.0036585
	6	0.0000062	0.0004820	0.0000000	0.0001365



NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.740	0	0.1682250	-0.3740660	0.1247010	-0.3303790
	1	0.3615810	-0.4804580	0.1682250	-0.3740660
	2	0.3193110	-0.4662100	0.6233520	-0.4845450
	3	0.8787860	0.3263760	0.4176650	-0.4931740
	4	0.0150037	0.1215670	0.0232049	0.1505540
	5	0.0000983	0.0099165	0.0000236	0.0048617
	6	0.0000004	0.0006185	0.0000000	0.0001861
2.800	0	0.0581989	-0.2341190	0.1246520	-0.3303240
	1	0.3539170	-0.4781840	0.0581989	-0.2341190
	2	0.2496810	-0.4328280	0.6175130	-0.4859940
	3	0.9780170	0.1466280	0.3889450	-0.4875110
	4	0.0219332	0.1464660	0.0504441	0.2188600
	5	0.0001485	0.0121861	0.0000416	0.0064478
	6	0.0000006	0.0007892	0.0000001	0.0002524
2.860	0	0.0080550	-0.0893875	0.1240200	-0.3296040
	1	0.3437200	-0.4749490	0.0080550	-0.0893875
	2	0.1964320	-0.3972990	0.6071650	-0.4883810
	3	0.9960110	-0.0630329	0.3706230	-0.4829720
	4	0.0321797	0.1764770	0.1208750	0.3259820
	5	0.0002227	0.0149225	0.0000730	0.0085423
	6	0.0000010	0.0010014	0.0000001	0.0003403
2.920	0	0.0010268	0.0320267	0.1218950	-0.3271640
	1	0.3295850	-0.4700630	0.0010268	0.0320267
	2	0.1561250	-0.3629740	0.5904040	-0.4917590
	3	0.9301790	-0.2548450	0.3592110	-0.4797690
	4	0.0474952	0.2126960	0.3244160	0.4681560
	5	0.0003319	0.0182162	0.0001281	0.0113176
	6	0.0000016	0.0012642	0.0000002	0.0004566
2.980	0	0.0152200	0.1224270	0.1173050	-0.3217840
	1	0.3099060	-0.4624550	0.0152200	0.1224270
	2	0.1256750	-0.3314830	0.5646780	-0.4957990
	3	0.8075930	-0.3941910	0.3524740	-0.4777410
	4	0.0707009	0.2563250	0.8083440	0.3936040
	5	0.0004920	0.0221766	0.0002255	0.0150150
	6	0.0000025	0.0015880	0.0000004	0.0006099
3.040	0	0.0357293	0.1856140	0.1092210	-0.3119160
	1	0.2828730	-0.4503950	0.0357293	0.1856140
	2	0.1025710	-0.3033970	0.5265500	-0.4992950
	3	0.6634360	-0.4725340	0.3488900	-0.4766190
	4	0.1064280	0.3083850	0.9454140	-0.2271710
	5	0.0007261	0.0269365	0.0003993	0.0199794
	6	0.0000039	0.0019854	0.0000007	0.0008111
	7	0.0000000	0.0001118	0.	0.

## REFRACTIVE INDEX M= 2.000

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.100	0	0.0551566	0.2282860	0.0966315	-0.2954550
	1	0.2466180	-0.4310430	0.0551566	0.2282860
	2	0.0848631	-0.2786780	0.4715700	-0.4991910
	3	0.5234790	-0.4994480	0.3473420	-0.4761260
	4	0.1623440	0.3687660	0.6151160	-0.4865680
	5	0.0010678	0.0326600	0.0007145	0.0267197
	6	0.0000061	0.0024717	0.0000012	0.0010751
	7	0.0000000	0.0001444	0.	0.
3.160	0	0.0707320	0.2563770	0.0787862	-0.2694050
	1	0.1997230	-0.3997920	0.0707320	0.2563770
	2	0.0710699	-0.2569410	0.3947800	-0.4888030
	3	0.4006270	-0.4900250	0.3469400	-0.4759960
	4	0.2508360	0.4334940	0.4076280	-0.4913930
	5	0.0015667	0.0395500	0.0012985	0.0360116
	6	0.0000094	0.0030646	0.0000020	0.0014205
	7	0.0000000	0.0001856	0.	0.
3.220	0	0.0819597	0.2743030	0.0557659	-0.2294690
	1	0.1425110	-0.3495740	0.0819597	0.2743030
	2	0.0600693	-0.2376150	0.2932550	-0.4552540
	3	0.2988050	-0.4577340	0.3469100	-0.4759870
	4	0.3895930	0.4876580	0.3035530	-0.4597920
	5	0.0022961	0.0478624	0.0024159	0.0490920
	6	0.0000143	0.0037850	0.0000035	0.0018719
	7	0.0000001	0.0002372	0.	0.
3.280	0	0.0893047	0.2851830	0.0297091	-0.1697840
	1	0.0797414	-0.2708920	0.0893047	0.2851830
	2	0.0510065	-0.2200110	0.1731240	-0.3783540
	3	0.2173540	-0.4124460	0.3465100	-0.4758580
	4	0.5929800	0.4912790	0.2477270	-0.4316920
	5	0.0033665	0.0579241	0.0046518	0.0680451
	6	0.0000217	0.0046583	0.0000061	0.0024617
	7	0.0000001	0.0003018	0.0000000	0.0001021
3.340	0	0.0935666	0.2912250	0.0070240	-0.0835147
	1	0.0245439	-0.1547300	0.0935666	0.2912250
	2	0.0432217	-0.2033560	0.0606795	-0.2387420
	3	0.1538110	-0.3607670	0.3449710	-0.4753590
	4	0.8336290	0.3724130	0.2155210	-0.4111830
	5	0.0049469	0.0701603	0.0094268	0.0966332
	6	0.0000326	0.0057143	0.0000104	0.0032327
	7	0.0000001	0.0003821	0.0000000	0.0001364
3.400	0	0.0956119	0.2940580	0.0011537	0.0339473
	1	0.0000011	-0.0010616	0.0956119	0.2940580
	2	0.0362006	-0.1867890	0.0018124	-0.0425335
	3	0.1052840	-0.3069190	0.3414340	-0.4741910
	4	0.9908950	0.0949871	0.1960570	-0.3970120
	5	0.0073011	0.0851339	0.0206621	0.1422500
	6	0.0000488	0.0069887	0.0000180	0.0042422
	7	0.0000002	0.0004816	0.0000000	0.0001816

## REFRACTIVE INDEX M= 2.000

NOLTR 62-161

X	N	RE A(N)	TM A(N)	RE B(N)	TM B(N)
3.460	0	0.0962749	0.2949680	0.0325075	0.1773440
	1	0.0298976	0.1703050	0.0962749	0.2949680
	2	0.0295487	-0.1693390	0.0271843	0.1626200
	3	0.0690310	-0.2535070	0.3348820	-0.4719490
	4	0.9480640	-0.2218980	0.1840700	-0.3875410
	5	0.0108521	0.1036070	0.0513808	0.2207730
	6	0.0000727	0.0085245	0.0000310	0.0055679
	7	0.0000004	0.0006045	0.0000001	0.0002407
3.520	0	0.0963387	0.2950550	0.1184870	0.3231840
	1	0.1181690	0.3228080	0.0963387	0.2950550
	2	0.0229917	-0.1498770	0.1178570	0.3224390
	3	0.0426518	-0.2020710	0.3240700	-0.4680260
	4	0.7659270	-0.4234180	0.1767530	-0.3814600
	5	0.0163011	0.1266310	0.1578150	0.3645670
	6	0.0001076	0.0103734	0.0000535	0.0073167
	7	0.0000006	0.0007556	0.0000001	0.0003179
3.580	0	0.0965549	0.2953510	0.2545250	0.4355940
	1	0.2407860	0.4275600	0.0965549	0.2953510
	2	0.0164128	-0.1270570	0.2286990	0.4199950
	3	0.0241283	-0.1534480	0.3074370	-0.4614320
	4	0.5687140	-0.4952560	0.1724740	-0.3777910
	5	0.0248574	0.1556900	0.6166100	0.4862120
	6	0.0001587	0.0125983	0.0000929	0.0096384
	7	0.0000009	0.0009408	0.0000002	0.0004185
3.640	0	0.0976913	0.2968970	0.4096420	0.4917680
	1	0.3650100	0.4814330	0.0976913	0.2968970
	2	0.0099463	-0.0992337	0.3281840	0.4695520
	3	0.0118035	-0.1080010	0.2830360	-0.4504740
	4	0.4098130	-0.4917990	0.1701940	-0.3758030
	5	0.0387119	0.1929080	0.8781390	-0.3271250
	6	0.0002334	0.0152759	0.0001625	0.0127483
	7	0.0000014	0.0011672	0.0000003	0.0005494
3.700	0	0.1006090	0.3008100	0.5495420	0.4975400
	1	0.4703250	0.4991190	0.1006090	0.3008100
	2	0.0041627	-0.0643847	0.4057790	0.4910420
	3	0.0043451	-0.0657737	0.2485480	-0.4321710
	4	0.2924490	-0.4548870	0.1691940	-0.3749230
	5	0.0620721	0.2412860	0.3887950	-0.4874770
	6	0.0003424	0.0185014	0.0002879	0.0169646
	7	0.0000021	0.0014429	0.0000005	0.0007196
3.760	0	0.1063830	0.3083270	0.6576140	0.4745080
	1	0.5511000	0.4973820	0.1063830	0.3083270
	2	0.0004028	-0.0200650	0.4621850	0.4985680
	3	0.0007073	-0.0265858	0.2016550	-0.4012360
	4	0.2069760	-0.4051380	0.1689200	-0.3746810
	5	0.1035740	0.3047080	0.2137450	-0.4099490
	6	0.0005017	0.0223937	0.0005190	0.0227758
	7	0.0000032	0.0017780	0.0000009	0.0009404
	8	0.0000000	0.0001152	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.820	0	0.1164920	0.3208140	0.7339050	0.4419150
	1	0.6097410	0.4878080	0.1164920	0.3208140
	2	0.0013325	0.0364785	0.5014980	0.4999980
	3	0.0000980	0.0099008	0.1414460	-0.3484810
	4	0.1441700	-0.3512620	0.1689010	-0.3746640
	5	0.1821160	0.3859400	0.1465170	-0.3536230
	6	0.0007351	0.0271036	0.0009599	0.0309680
	7	0.0000048	0.0021842	0.0000015	0.0012272
	8	0.0000000	0.0001456	0.	0.
3.880	0	0.1331190	0.3397040	0.7852520	0.4106470
	1	0.6509630	0.4766660	0.1331190	0.3397040
	2	0.0117531	0.1077730	0.5279290	0.4992190
	3	0.0019520	0.0441378	0.0725081	-0.2593270
	4	0.0975145	-0.2966570	0.1686900	-0.3744780
	5	0.3394040	0.4735070	0.1146740	-0.3186280
	6	0.0010787	0.0328259	0.0018424	0.0428838
	7	0.0000072	0.0026757	0.0000026	0.0015998
	8	0.0000000	0.0001834	0.	0.
3.940	0	0.1596010	0.3662350	0.8189080	0.3850940
	1	0.6792480	0.4667650	0.1596010	0.3662350
	2	0.0394530	0.1946700	0.5449300	0.4979770
	3	0.0059124	0.0766646	0.0137174	-0.1163150
	4	0.0627609	-0.2425320	0.1678260	-0.3737120
	5	0.6407080	0.4797930	0.0974861	-0.2966190
	6	0.0015879	0.0398168	0.0037358	0.0610067
	7	0.0000107	0.0032691	0.0000043	0.0020845
	8	0.0000001	0.0002300	0.	0.
4.000	0	0.2010080	0.4007540	0.8404840	0.3661570
	1	0.6981660	0.4590530	0.2010080	0.4007540
	2	0.0951523	0.2934250	0.5551540	0.4969490
	3	0.0118233	0.1080900	0.0071066	0.0840004
	4	0.0372032	-0.1892590	0.1657980	-0.3718990
	5	0.9745050	0.1576230	0.0875050	-0.2825740
	6	0.0023502	0.0484215	0.0082496	0.0904518
	7	0.0000159	0.0039847	0.0000074	0.0027167
	8	0.0000001	0.0002874	0.0000000	0.0001239
4.060	0	0.2645890	0.4411140	0.8538800	0.3532260
	1	0.7104110	0.4535720	0.2645890	0.4411140
	2	0.1893800	0.3918110	0.5606420	0.4963090
	3	0.0197338	0.1390840	0.0993726	0.2991620
	4	0.0191152	-0.1369300	0.1620130	-0.3684630
	5	0.8716740	-0.3344520	0.0815198	-0.2736320
	6	0.0035072	0.0591179	0.0210216	0.1434560
	7	0.0000235	0.0048468	0.0000126	0.0035445
	8	0.0000001	0.0003579	0.0000000	0.0001622

NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.120	0	0.3589950	0.4797060	0.8617390	0.3451730
	1	0.7180160	0.4499660	0.3589950	0.4797060
	2	0.3244290	0.4681610	0.5630120	0.4960140
	3	0.0299202	0.1703670	0.2816130	0.4497850
	4	0.0073784	-0.0855804	0.1557590	-0.3626260
	5	0.5498020	-0.4975140	0.0779413	-0.2680790
	6	0.0052972	0.0725891	0.0702847	0.2556260
	7	0.0000346	0.0058847	0.0000215	0.0046344
	8	0.0000002	0.0004442	0.0000000	0.0002119
4.180	0	0.4898120	0.4998960	0.8658840	0.3407770
	1	0.7225710	0.4477300	0.4898120	0.4998960
	2	0.4856870	0.4997950	0.5636170	0.4959360
	3	0.0429292	0.2026980	0.4812090	0.4996470
	4	0.0012458	-0.0352734	0.1461790	-0.3532850
	5	0.3313080	-0.4706840	0.0758893	-0.2648210
	6	0.0081390	0.0898487	0.4132630	0.4924190
	7	0.0000509	0.0071342	0.0000370	0.0060797
	8	0.0000003	0.0005496	0.0000001	0.0002762
4.240	0	0.6493600	0.4771700	0.8676460	0.3388750
	1	0.7253920	0.4463160	0.6493600	0.4771700
	2	0.6445380	0.4786530	0.5636650	0.4959300
	3	0.0596506	0.2368380	0.6401020	0.4799700
	4	0.0001929	0.0138875	0.1322630	-0.3387760
	5	0.2076590	-0.4056310	0.0748239	-0.2631070
	6	0.0128134	0.1124690	0.6862730	-0.4640070
	7	0.0000746	0.0086393	0.0000642	0.0080153
	8	0.0000005	0.0006780	0.0000001	0.0003593
4.300	0	0.8080810	0.3938100	0.8680830	0.3384010
	1	0.7276500	0.4451690	0.8080810	0.3938100
	2	0.7752250	0.4174340	0.5643230	0.4958450
	3	0.0814250	0.2734870	0.7476920	0.4343370
	4	0.0038299	0.0617678	0.1129130	-0.3164860
	5	0.1349080	-0.3416250	0.0743771	-0.2623840
	6	0.0208894	0.1430140	0.1857670	-0.3889180
	7	0.0001093	0.0104543	0.0001133	0.0106423
	8	0.0000007	0.0008339	0.0000002	0.0004666
4.360	0	0.9269320	0.2602490	0.8681210	0.3383590
	1	0.7304670	0.4437170	0.9269320	0.2602490
	2	0.8679690	0.3385240	0.5668020	0.4955170
	3	0.1101870	0.3131220	0.8158780	0.3875840
	4	0.0118525	0.1082220	0.0872408	-0.2821880
	5	0.0889404	-0.2846580	0.0742687	-0.2622080
	6	0.0358466	0.1859070	0.0910068	-0.2876190
	7	0.0001600	0.0126477	0.0002037	0.0142714
	8	0.0000010	0.0010230	0.0000004	0.0006052

NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.420	0	0.9872580	0.1121570	0.8686510	0.3377820
	1	0.7349970	0.4413350	0.9872580	0.1121570
	2	0.9269610	0.2602000	0.5724470	0.4947240
	3	0.1486210	0.3557140	0.8582960	0.3487470
	4	0.0240215	0.1531160	0.0555049	-0.2289630
	5	0.0580354	-0.2338100	0.0742586	-0.2621910
	6	0.0664811	0.2491210	0.0601031	-0.2376780
	7	0.0002343	0.0153065	0.0003768	0.0194082
	8	0.0000016	0.0012518	0.0000006	0.0007845
4.480	0	0.9996730	-0.0180853	0.8705900	0.3356540
	1	0.7424900	0.4372630	0.9996730	-0.0180853
	2	0.9616780	0.1919740	0.5828360	0.4930910
	3	0.2002530	0.4001890	0.8846480	0.3194460
	4	0.0401627	0.1963410	0.0217578	-0.1458920
	5	0.0363652	-0.1871970	0.0741176	-0.2619620
	6	0.1392030	0.3461580	0.0463305	-0.2102000
	7	0.0003440	0.0185433	0.0007257	0.0269295
	8	0.0000023	0.0015283	0.0000010	0.0010166
	9	0.0000000	0.0001092	0.	0.
4.540	0	0.9859550	-0.1176770	0.8749210	0.3308080
	1	0.7543400	0.4304780	0.9859550	-0.1176770
	2	0.9809570	0.1366760	0.5998820	0.4899220
	3	0.2692560	0.4435730	0.9009880	0.2986780
	4	0.0601806	0.2378210	0.0003366	-0.0183438
	5	0.0209331	-0.1431600	0.0736059	-0.2611280
	6	0.3404790	0.4764890	0.0391225	-0.1938870
	7	0.0005068	0.0225069	0.0014839	0.0384935
	8	0.0000035	0.0018620	0.0000017	0.0013179
	9	0.0000000	0.0001361	0.	0.
4.600	0	0.9632360	-0.1881830	0.8826970	0.3217810
	1	0.7720990	0.4194780	0.9632360	-0.1881830
	2	0.9911420	0.0936974	0.6259310	0.4838810
	3	0.3595470	0.4798680	0.9109690	0.2847890
	4	0.0840828	0.2775120	0.0270440	0.1622120
	5	0.0101900	-0.1004300	0.0724566	-0.2592420
	6	0.8877890	0.3156260	0.0350215	-0.1838340
	7	0.0007513	0.0273991	0.0033338	0.0576424
	8	0.0000051	0.0022641	0.0000029	0.0017101
	9	0.0000000	0.0001690	0.	0.
4.660	0	0.9407540	-0.2360850	0.8949770	0.3065830
	1	0.7973980	0.4019380	0.9407540	-0.2360850
	2	0.9962470	0.0611501	0.6637450	0.4724270
	3	0.4725850	0.4992480	0.9168240	0.2761480
	4	0.1120100	0.3153780	0.1578090	0.3645620
	5	0.0033847	-0.0580799	0.0703608	-0.2557540
	6	0.7479210	-0.4342070	0.0326059	-0.1776030
	7	0.0011236	0.0335010	0.0088123	0.0934593
	8	0.0000075	0.0027485	0.0000049	0.0022233
	9	0.0000000	0.0002092	0.0000000	0.0001059

## REFRACTIVE INDEX M= 2.000

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.720	0	0.9222480	-0.2677810	0.9126310	0.2823750
	1	0.8316290	0.3741960	0.9222480	-0.2677810
	2	0.9986360	0.0369092	0.7161360	0.4508720
	3	0.6037920	0.4891090	0.9199780	0.2713280
	4	0.1442680	0.3513610	0.4051430	0.4909200
	5	0.0002391	-0.0154622	0.0669556	-0.2499450
	6	0.3154490	-0.4646940	0.0311910	-0.1738340
	7	0.0017018	0.0412184	0.0325149	0.1773630
	8	0.0000111	0.0033318	0.0000084	0.0028988
	9	0.0000001	0.0002583	0.0000000	0.0001372
4.780	0	0.9085950	-0.2881850	0.9358290	0.2450580
	1	0.8750900	0.3306170	0.9085950	-0.2881850
	2	0.9996390	0.0190082	0.7846310	0.4110780
	3	0.7395970	0.4388540	0.9214000	0.2691130
	4	0.1813660	0.3853210	0.6702410	0.4701260
	5	0.0007757	0.0278400	0.0618191	-0.2408270
	6	0.1524380	-0.3594450	0.0304033	-0.1716940
	7	0.0026245	0.0511629	0.3068650	0.4611930
	8	0.0000163	0.0040345	0.0000144	0.0037956
	9	0.0000001	0.0003181	0.0000000	0.0001776
4.840	0	0.8994140	-0.3007800	0.9629340	0.1889220
	1	0.9250970	0.2632350	0.8994140	-0.3007800
	2	0.9999670	0.0057328	0.8660360	0.3406140
	3	0.8595190	0.3474850	0.9218210	0.2684530
	4	0.2240400	0.4169480	0.8517730	0.3553250
	5	0.0052173	0.0720424	0.0544863	-0.2269750
	6	0.0850741	-0.2789920	0.0300146	-0.1706270
	7	0.0041524	0.0643056	0.3042670	-0.4600960
	8	0.0000238	0.0048817	0.0000250	0.0049992
	9	0.0000001	0.0003907	0.0000001	0.0002294
4.900	0	0.8938680	-0.3080070	0.9884150	0.1070060
	1	0.9726730	0.1630360	0.8938680	-0.3080070
	2	0.9999810	-0.0044038	0.9462870	0.2254510
	3	0.9452390	0.2275130	0.9218530	0.2684020
	4	0.2732670	0.4456370	0.9442550	0.2294290
	5	0.0139239	0.1171750	0.0445220	-0.2062520
	6	0.0513261	-0.2206620	0.0298684	-0.1702240
	7	0.0068185	0.0822922	0.0649110	-0.2463690
	8	0.0000349	0.0059047	0.0000441	0.0066387
	9	0.0000002	0.0004788	0.0000001	0.0002962
4.960	0	0.8910100	-0.3116270	0.9999610	-0.0062565
	1	0.9993470	0.0255523	0.8910100	-0.3116270
	2	0.9998380	-0.0127261	0.9961970	0.0615479
	3	0.9900140	0.0994274	0.9220710	0.2680590
	4	0.3302360	0.4702980	0.9833070	0.1281180
	5	0.0273457	0.1630890	0.0317509	-0.1753360
	6	0.0318281	-0.1755420	0.0298432	-0.1701540
	7	0.0118378	0.1081560	0.0319101	-0.1757610
	8	0.0000510	0.0071426	0.0000795	0.0089157
	9	0.0000003	0.0005854	0.0000001	0.0003822

NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.020	0	0.8899190	-0.3129900	0.9776070	-0.1479590
	1	0.9804540	-0.1384340	0.8899190	-0.3129900
	2	0.9995810	-0.0204680	0.9833140	-0.1280920
	3	0.9996480	-0.0187545	0.9230590	0.2664980
	4	0.3962270	0.4891130	0.9969650	0.0550112
	5	0.0459868	0.2094560	0.0169119	-0.1289410
	6	0.0194248	-0.1380120	0.0298319	-0.1701230
	7	0.0224467	0.1481310	0.0213145	-0.1444310
	8	0.0000748	0.0086459	0.0001480	0.0121644
	9	0.0000005	0.0007143	0.0000002	0.0004932
5.080	0	0.8897350	-0.3132200	0.9018690	-0.2974910
	1	0.9019320	-0.2974060	0.8897350	-0.3132200
	2	0.9991670	-0.0288476	0.9019960	-0.2973210
	3	0.9860000	-0.1174920	0.9254390	0.2626810
	4	0.4723270	0.4992340	0.9999800	0.0044505
	5	0.0703725	0.2557740	0.0034548	-0.0586758
	6	0.0110874	-0.1047110	0.0297296	-0.1698400
	7	0.0495340	0.2169800	0.0165881	-0.1277220
	8	0.0001098	0.0104797	0.0002883	0.0169763
	9	0.0000008	0.0008698	0.0000004	0.0006365
5.140	0	0.8896410	-0.3133360	0.7727090	-0.4190820
	1	0.7779660	-0.4156140	0.8896410	-0.3133360
	2	0.9984660	-0.0391406	0.7828810	-0.4122840
	3	0.9604150	-0.1949830	0.9298800	0.2553490
	4	0.5588630	0.4965230	0.9991150	-0.0297321
	5	0.1010210	0.3013560	0.0022807	0.0477024
	6	0.0054365	-0.0735319	0.0294241	-0.1689920
	7	0.1466220	0.3537290	0.0141161	-0.1179700
	8	0.0001621	0.0127306	0.0006009	0.0245064
	9	0.0000011	0.0010575	0.0000007	0.0008224
5.200	0	0.8888240	-0.3143500	0.6182430	-0.4858170
	1	0.6423980	-0.4792940	0.8888240	-0.3143500
	2	0.9972090	-0.0527580	0.6637830	-0.4724140
	3	0.9308690	-0.2536760	0.9370610	0.2428540
	4	0.6544450	0.4755490	0.9972560	-0.0523114
	5	0.1384170	0.3453370	0.0425084	0.2017460
	6	0.0018580	-0.0430646	0.0287895	-0.1672140
	7	0.7133860	0.4521800	0.0127173	-0.1120520
	8	0.0002408	0.0155164	0.0013963	0.0373416
	9	0.0000016	0.0012837	0.0000011	0.0010646



## NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.260	0	0.8864010	-0.3173240	0.4744110	-0.4993450
	1	0.5229810	-0.4994720	0.8864010	-0.3173240
	2	0.9948870	-0.0713240	0.5652930	-0.4957190
	3	0.9019480	-0.2973860	0.9475570	0.2229180
	4	0.7546910	0.4302700	0.9955310	-0.0667026
	5	0.1829870	0.3866560	0.1831790	0.3868130
	6	0.0001515	-0.0123070	0.0276805	-0.1640560
	7	0.4925200	-0.4999440	0.0119038	-0.1084530
	8	0.0003612	0.0190023	0.0039449	0.0626843
	9	0.0000024	0.0015562	0.0000019	0.0013816
	10	0.0000000	0.0001212	0.	0.
5.320	0	0.8813120	-0.3234210	0.3610820	-0.4803140
	1	0.4303090	-0.4951190	0.8813120	-0.3234210
	2	0.9905520	-0.0967425	0.4915420	-0.4999280
	3	0.8758170	-0.3297900	0.9615450	0.1922930
	4	0.8511760	0.3559150	0.9942920	-0.0753365
	5	0.2350730	0.4240450	0.4685800	0.4990120
	6	0.0003801	0.0194919	0.0259306	-0.1589280
	7	0.1291740	-0.3353930	0.0114387	-0.1063380
	8	0.0005492	0.0234285	0.0173137	0.1304380
	9	0.0000035	0.0018846	0.0000032	0.0017996
	10	0.0000000	0.0001491	0.	0.
5.380	0	0.8721530	-0.3339200	0.2801720	-0.4490830
	1	0.3632620	-0.4809390	0.8721530	-0.3339200
	2	0.9824780	-0.1312060	0.4392300	-0.4962930
	3	0.8531890	-0.3539170	0.9781050	0.1463420
	4	0.9318330	0.2520310	0.9935600	-0.0799920
	5	0.2948970	0.4559960	0.7861570	0.4100170
	6	0.0028076	0.0529121	0.0233559	-0.1510310
	7	0.0540767	-0.2261690	0.0111910	-0.1051940
	8	0.0008511	0.0291610	0.4379690	0.4961370
	9	0.0000052	0.0022805	0.0000056	0.0023563
	10	0.0000000	0.0001829	0.0000000	0.0001121
5.440	0	0.8569110	-0.3501640	0.2253620	-0.4178200
	1	0.3166160	-0.4651560	0.8569110	-0.3501640
	2	0.9676140	-0.1770240	0.4034420	-0.4905880
	3	0.8359790	-0.3721000	0.9937510	0.0788061
	4	0.9840580	0.1252490	0.9932240	-0.0820352
	5	0.3624950	0.4807210	0.9613590	0.1927370
	6	0.0078763	0.0883981	0.0197757	-0.1392290
	7	0.0282251	-0.1656150	0.0110792	-0.1046730
	8	0.0013552	0.0367888	0.0668090	-0.2496910
	9	0.0000076	0.0027584	0.0000096	0.0031069
	10	0.0000000	0.0002239	0.0000000	0.0001440

NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
5.500	0	0.8325720	-0.3733580	0.1892750	-0.3917270
	1	0.2850180	-0.4514230	0.8325720	-0.3733580
	2	0.9408030	-0.2359930	0.3798070	-0.4853390
	3	0.8177010	-0.3860910	0.9997000	-0.0173199
	4	0.9998800	-0.0109389	0.9931330	-0.0825836
	5	0.4376260	0.4960940	0.9999870	-0.0035761
	6	0.0162055	0.1262650	0.0150742	-0.1218480
	7	0.0161914	-0.1262110	0.0110452	-0.1045140
	8	0.0022454	0.0473328	0.0178834	-0.1325280
	9	0.0000111	0.0033364	0.0000171	0.0041359
	10	0.0000001	0.0002736	0.0000000	0.0001853
5.560	0	0.7945960	-0.4039970	0.1660330	-0.3721100
	1	0.2641860	-0.4408990	0.7945960	-0.4039970
	2	0.8940440	-0.3077810	0.3649310	-0.4814110
	3	0.8036780	-0.3972150	0.9783990	-0.1453760
	4	0.9798190	-0.1406180	0.9931260	-0.0826232
	5	0.5195870	0.4996160	0.9810430	-0.1363740
	6	0.0285998	0.1666790	0.0093679	-0.0963333
	7	0.0094978	-0.0969927	0.0110424	-0.1045010
	8	0.0039516	0.0627376	0.0096135	-0.0975761
	9	0.0000163	0.0040372	0.0000311	0.0055780
	10	0.0000001	0.0003337	0.0000001	0.0002383
5.620	0	0.7364500	-0.4405580	0.1515050	-0.3585400
	1	0.2509530	-0.4335620	0.7364500	-0.4405580
	2	0.8168690	-0.3867740	0.3562590	-0.4788930
	3	0.7911340	-0.4064980	0.9042980	-0.2941820
	4	0.9321990	-0.2514040	0.9930470	-0.0830970
	5	0.6049620	0.4884250	0.9492830	-0.2194200
	6	0.0460588	0.2096120	0.0034516	-0.0586485
	7	0.0053573	-0.0729973	0.0110276	-0.1044320
	8	0.0076695	0.0872392	0.0067147	-0.0816676
	9	0.0000239	0.0048900	0.0000587	0.0076615
	10	0.0000002	0.0004063	0.0000001	0.0003064
5.680	0	0.6499960	-0.4769710	0.1428850	-0.3499550
	1	0.2430080	-0.4289000	0.6499960	-0.4769710
	2	0.7003330	-0.4581120	0.3518460	-0.4775460
	3	0.7792310	-0.4147650	0.7603440	-0.4268730
	4	0.8687250	-0.3377010	0.9927250	-0.0849817
	5	0.6972560	0.4594450	0.9201820	-0.2710120
	6	0.0697799	0.2547760	0.0060052	-0.0022918
	7	0.0026734	-0.0516354	0.0109568	-0.1041000
	8	0.0177666	0.1321020	0.0053676	-0.0730673
	9	0.0000352	0.0059331	0.0001168	0.0108047
	10	0.0000002	0.0004938	0.0000001	0.0003946

REFRACTIVE INDEX  $M = 2.000$ 

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
6.000	0	0.0079773	-0.0889587	0.1347850	-0.3414940
	1	0.2298760	-0.4207530	0.0079773	-0.0889587
	2	0.0361140	-0.1865740	0.3434180	-0.4748490
	3	0.6819540	-0.4657180	0.0714027	-0.2574960
	4	0.5595850	-0.4964370	0.9681840	-0.1755110
	5	0.9984090	-0.0398502	0.8570820	-0.3499900
	6	0.3603660	0.4801070	0.9264220	0.2610830
	7	0.0041131	0.0640017	0.0073671	-0.0855151
	8	0.0119060	-0.1084630	0.0038065	-0.0615792
	9	0.0003265	0.0180662	0.0508416	-0.2196740
	10	0.0000019	0.0013735	0.0000026	0.0016005
	11	0.0000000	0.0001119	0.	0.
6.200	0	0.0515767	0.2211710	0.1150310	-0.3190590
	1	0.1912580	-0.3932920	0.0515767	0.2211710
	2	0.0005147	0.0226814	0.2884750	-0.4530530
	3	0.5052050	-0.4999730	0.0202466	-0.1408430
	4	0.4545060	-0.4979260	0.8066170	-0.3949510
	5	0.8114320	-0.3911650	0.8547950	-0.3523070
	6	0.7003730	0.4580950	0.8155580	-0.3878440
	7	0.0283936	0.1660950	0.0007172	-0.0267718
	8	0.0015200	-0.0389581	0.0037804	-0.0613684
	9	0.0021428	0.0462409	0.0021059	-0.0458420
	10	0.0000067	0.0025978	0.0000189	0.0043532
	11	0.0000000	0.0002161	0.0000000	0.0001738
6.400	0	0.1061610	0.3080440	0.0435067	-0.2039950
	1	0.0749347	-0.2632860	0.1061610	0.3080440
	2	0.0088496	0.0936551	0.1192980	-0.3241390
	3	0.1524610	-0.3594680	0.0131729	-0.1140150
	4	0.3796580	-0.4853020	0.2010220	-0.4007640
	5	0.5203010	-0.4995880	0.8488300	-0.3582140
	6	0.9761700	0.1525200	0.6748240	-0.4684410
	7	0.1065770	0.3085750	0.0399776	0.1959070
	8	0.0000122	0.0035004	0.0034729	-0.0588288
	9	0.9881330	-0.1082890	0.0013194	-0.0362998
	10	0.0000252	0.0050250	0.0003014	0.0173590
	11	0.0000002	0.0004112	0.0000002	0.0004051
6.600	0	0.1180570	0.3226750	0.0298814	0.1702600
	1	0.0276840	0.1640660	0.1180570	0.3226750
	2	0.0131741	0.1140200	0.0254533	0.1574970
	3	0.0141025	0.1179140	0.0127561	-0.1122200
	4	0.2960970	-0.4565340	0.0074008	0.0857091
	5	0.3141560	-0.4641790	0.8067820	-0.3948220
	6	0.9228280	-0.2668650	0.6386640	-0.4803880
	7	0.3196550	0.4663430	0.9506390	0.2166200
	8	0.0028490	0.0532998	0.0021245	-0.0460429
	9	0.0027706	-0.0525634	0.0012166	-0.0348587
	10	0.0001097	0.0104722	0.0046992	-0.0683896
	11	0.0000006	0.0007768	0.0000010	0.0009936

## REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
6.800	0	0.1199360	0.3248860	0.4544510	0.4979210
	1	0.4279260	0.4947780	0.1199360	0.3248860
	2	0.0192468	0.1373910	0.4039450	0.4906870
	3	0.1897620	0.3921130	0.0079665	-0.0888993
	4	0.1655970	-0.3717180	0.0787529	0.2693530
	5	0.1928600	-0.3945440	0.6256590	-0.4839520
	6	0.6258250	-0.4839090	0.6344970	-0.4815710
	7	0.7382550	0.4395850	0.6259860	-0.4838670
	8	0.0162829	0.1265610	0.0000024	-0.0015428
	9	0.0002770	-0.0166409	0.0012067	-0.0347160
	10	0.0008084	0.0284216	0.0005606	-0.0236712
	11	0.0000022	0.0014743	0.0000078	0.0027913
7.000	0	0.1474380	0.3545420	0.7646240	0.4242340
	1	0.6961060	0.4599370	0.1474380	0.3545420
	2	0.0496935	0.2173110	0.6300450	0.4827920
	3	0.3098860	0.4624470	0.0006490	0.0254671
	4	0.0116831	-0.1074550	0.1088640	0.3114680
	5	0.1158760	-0.3200770	0.1018680	-0.3024750
	6	0.3383110	-0.4731350	0.6295770	-0.4829180
	7	0.9996290	-0.0192570	0.4633270	-0.4986530
	8	0.0629718	0.2429120	0.0288871	0.1674890
	9	0.0000707	0.0084073	0.0010583	-0.0325139
	10	0.0490812	-0.2160380	0.0003873	-0.0196765
	11	0.0000083	0.0028782	0.0001706	0.0130619
7.200	0	0.2814320	0.4496980	0.8480550	0.3589670
	1	0.7718550	0.4196370	0.2814320	0.4496980
	2	0.2115620	0.4084160	0.6907250	0.4621950
	3	0.3594160	0.4798290	0.1358300	0.3426080
	4	0.1350960	0.3418260	0.1124080	0.3158680
	5	0.0553001	-0.2285650	0.1343960	0.3410770
	6	0.1533530	-0.3603270	0.5901710	-0.4918020
	7	0.7673650	-0.4225120	0.4263040	-0.4945390
	8	0.2219290	0.4155440	0.9474460	0.2231420
	9	0.0016097	0.0400883	0.0005179	-0.0227519
	10	0.0005589	-0.0236342	0.0003670	-0.0191550
	11	0.0000377	0.0061400	0.0006206	-0.0249041
	12	0.0000002	0.0004398	0.0000004	0.0006194
7.400	0	0.7032970	0.4568040	0.8620300	0.3448680
	1	0.7849090	0.4108860	0.7032970	0.4568040
	2	0.7032850	0.4568100	0.6979150	0.4591620
	3	0.3878320	0.4872560	0.7032740	0.4568150
	4	0.5012500	0.4999980	0.1179160	0.3225090
	5	0.0063207	-0.0792511	0.3702760	0.4828790
	6	0.0543225	-0.2266530	0.4362770	-0.4959230
	7	0.4368780	-0.4960000	0.4216270	-0.4938200
	8	0.6853790	0.4643650	0.4375160	-0.4960800
	9	0.0080282	0.0892401	0.0000983	0.0099165
	10	0.0000346	-0.0058853	0.0003610	-0.0189965
	11	0.0003355	0.0183134	0.0001433	-0.0119701
	12	0.0000007	0.0008387	0.0000033	0.0018239

NOLTR 62-161

REFRACTIVE INDEX M= 2.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
7.600	0	0.9995420	0.0214010	0.8639340	0.3428590
	1	0.7910960	0.4065260	0.9995420	0.0214010
	2	0.9883240	0.1074210	0.7055150	0.4558110
	3	0.4426900	0.4967050	0.9681230	0.1756730
	4	0.7063270	0.4554440	0.1617810	0.3682500
	5	0.0371166	0.1890480	0.4469120	0.4971740
	6	0.0090644	-0.0947746	0.0456073	-0.2086320
	7	0.2013650	-0.4010200	0.4182770	-0.4932760
	8	0.9768200	-0.1504740	0.2897890	-0.4536650
	9	0.0310468	0.1734440	0.0182156	0.1337300
	10	0.0000740	0.0086025	0.0002952	-0.0171786
	11	0.0028098	-0.0529334	0.0001086	-0.0104220
	12	0.0000027	0.0016576	0.0001308	0.0114361
	13	0.0000000	0.0001316	0.0000000	0.0001531
7.800	0	0.9343920	-0.2475950	0.8899050	0.3130080
	1	0.8335690	0.3724670	0.9343920	-0.2475950
	2	0.9910620	-0.0941158	0.7637400	0.4247840
	3	0.5955020	0.4907950	0.9980160	0.0444939
	4	0.7878110	0.4088580	0.3566380	0.4790070
	5	0.3432910	0.4748080	0.4599320	0.4983920
	6	0.0019583	0.0442088	0.3272790	0.4692200
	7	0.0642441	-0.2451870	0.3882690	-0.4873560
	8	0.5799010	-0.4935750	0.2598400	-0.4385470
	9	0.1212620	0.3264310	0.9106710	0.2852180
	10	0.0007962	0.0282066	0.0000991	-0.0099558
	11	0.0000993	-0.0099645	0.0001054	-0.0102645
	12	0.0000133	0.0036528	0.0000995	-0.0099728
	13	0.0000001	0.0002493	0.0000001	0.0003890
8.000	0	0.8855560	-0.3183500	0.9695750	0.1717520
	1	0.9510660	0.2157310	0.8855560	-0.3183500
	2	0.9754980	-0.1546010	0.9260030	0.2617660
	3	0.9018850	0.2974700	0.9997880	0.0145444
	4	0.8262160	0.3789240	0.8676340	0.3388880
	5	0.7636510	0.4248390	0.4627340	0.4986090
	6	0.0476486	0.2130220	0.6873010	0.4635930
	7	0.0054338	-0.0735141	0.2748100	-0.4464190
	8	0.2763010	-0.4471670	0.2559360	-0.4363860
	9	0.5276020	0.4992360	0.2779770	-0.4480020
	10	0.0035763	0.0596953	0.0001792	0.0133848
	11	0.0000016	-0.0012707	0.0001017	-0.0100828
	12	0.0001631	0.0127710	0.0000357	-0.0059763
	13	0.0000002	0.0004785	0.0000015	0.0012263

## REFRACTIVE INDEX M= 2.000

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
8.200	0	0.8767130	-0.3287670	0.9363680	-0.2440960
	1	0.9372370	-0.2425360	0.8767130	-0.3287670
	2	0.9707930	-0.1683850	0.9381230	-0.2409320
	3	0.9522270	-0.2132860	0.9998420	0.0125799
	4	0.8640350	0.3427510	0.9627350	-0.1894110
	5	0.9451120	0.2277610	0.4985620	0.4999980
	6	0.2171600	0.4123130	0.7792310	0.4147650
	7	0.0092557	0.0957602	0.0153773	-0.1230480
	8	0.1089880	-0.3116250	0.2537790	-0.4351720
	9	0.9415260	-0.2346380	0.1664800	-0.3725110
	10	0.0135625	0.1156660	0.0103721	0.1013140
	11	0.0000496	0.0070399	0.0000748	-0.0086494
	12	0.0002648	-0.0162692	0.0000294	-0.0054208
	13	0.0000009	0.0009610	0.0002493	0.0157865
8.400	0	0.8380910	-0.3683670	0.2156660	-0.4112830
	1	0.2727540	-0.4453750	0.8380910	-0.3683670
	2	0.9233040	-0.2661080	0.3291850	-0.4699170
	3	0.5821230	-0.4932100	0.9839610	-0.1256260
	4	0.9999690	0.0055765	0.7777350	-0.4157680
	5	0.9994890	0.0225982	0.9605460	0.1946730
	6	0.9318370	0.2520260	0.7979790	0.4015080
	7	0.2114430	0.4083320	0.9079610	0.2890810
	8	0.0013119	0.0361967	0.1570120	-0.3638120
	9	0.1582460	-0.3649710	0.1435340	-0.3506160
	10	0.3085540	0.4618960	0.1596590	-0.3662890
	11	0.0014880	0.0385454	0.0001651	0.0128496
	12	0.0000002	0.0004042	0.0000270	-0.0051968
	13	0.0001101	0.0104914	0.0000088	-0.0029606
	14	0.0000001	0.0002740	0.0000007	0.0008621
9.000	0	0.2208890	-0.4148460	0.1392730	-0.3462310
	1	0.2019440	-0.4014500	0.2208890	-0.4148460
	2	0.2217630	-0.4154330	0.2721440	-0.4450640
	3	0.5185590	-0.4996550	0.2226160	-0.4160020
	4	0.3531310	-0.4779430	0.7651160	-0.4239260
	5	0.9813620	-0.1352410	0.4534570	-0.4978290
	6	0.9510190	-0.2158280	0.8848390	0.3192170
	7	0.8151890	0.3881440	0.9776410	0.1478490
	8	0.1844600	0.3878590	0.6525660	0.4761550
	9	0.0053195	-0.0727406	0.1289660	-0.3351620
	10	0.2476500	-0.4316470	0.0763285	-0.2655230
	11	0.0222582	0.1475220	0.6674760	0.4711180
	12	0.0001518	0.0123201	0.0000002	-0.0004592
	13	0.0000019	-0.0013827	0.0000077	-0.0027666
	14	0.0000019	0.0013841	0.0000035	-0.0018657
	15	0.	0.	0.0000000	0.0001594

## REFRACTIVE INDEX M= 2.000

NOLTR 62-161

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
9.400	0	0.0784642	0.2689010	0.1030820	-0.3040660
	1	0.1462040	-0.3533100	0.0784642	0.2689010
	2	0.0210340	0.1434980	0.1985110	-0.3988790
	3	0.3286970	-0.4697400	0.0005751	0.0239741
	4	0.0985068	-0.2979990	0.5132100	-0.4998250
	5	0.5507890	-0.4974140	0.3250670	-0.4684000
	6	0.8411940	-0.3654950	0.5995930	-0.4899810
	7	0.9214490	-0.2690360	0.9816380	0.1342570
	8	0.7065560	0.4553400	0.9908870	-0.0950257
	9	0.0922386	0.2893620	0.0000583	0.0076345
	10	0.0231203	-0.1502860	0.0739856	-0.2617480
	11	0.9256910	-0.2622730	0.0432714	-0.2034670
	12	0.0021297	0.0461000	0.0027662	0.0525219
	13	0.0000126	0.0035498	0.0000032	-0.0018042
	14	0.0000038	-0.0019574	0.0000020	-0.0014064
	15	0.0000001	0.0003324	0.0000050	-0.0022309
9.800	0	0.1268680	0.3328250	0.1115480	0.3148100
	1	0.1115000	0.3147500	0.1268680	0.3328250
	2	0.0430960	0.2030730	0.1114520	0.3146910
	3	0.0931638	0.2906620	0.0029708	0.0544243
	4	0.0596559	-0.2368480	0.0786687	0.2692210
	5	0.0005957	-0.0243989	0.2983030	-0.4575130
	6	0.6028510	-0.4893070	0.0501165	-0.2181850
	7	0.6532540	-0.4759340	0.9681950	-0.1754800
	8	0.9693130	-0.1724690	0.9819240	-0.1332250
	9	0.5778640	0.4939000	0.9702970	-0.1697660
	10	0.0168415	0.1286780	0.0381833	-0.1916380
	11	0.0382475	-0.1917930	0.0364427	-0.1873890
	12	0.0533605	0.2247510	0.0383154	-0.1919570
	13	0.0002267	0.0150543	0.0000685	0.0082757
	14	0.0000006	0.0007625	0.0000016	-0.0012548
	15	0.0000601	-0.0077541	0.0000005	-0.0007165
	16	0.	0.	0.0000003	0.0005810
10.200	0	0.1772090	0.3818460	0.8004030	0.3996980
	1	0.7513830	0.4322110	0.1772090	0.3818460
	2	0.1028080	0.3037090	0.7021060	0.4573330
	3	0.4944770	0.4999690	0.0410040	0.1983000
	4	0.0072708	0.0849587	0.3154830	0.4647080
	5	0.0332412	0.1792660	0.0059090	-0.0766426
	6	0.0074358	-0.0859100	0.0326057	-0.1776020
	7	0.4414180	-0.4965560	0.0089095	-0.0939689
	8	0.5635700	-0.4959420	0.9635780	-0.1873370
	9	0.9995240	-0.0218211	0.8625070	-0.3443670
	10	0.3348710	0.4719450	0.8029310	0.3977850
	11	0.0000260	0.0051037	0.0312654	-0.1740340
	12	0.0673980	-0.2507100	0.0169036	-0.1289100
	13	0.0031594	0.0561200	0.4273570	0.4946950
	14	0.0000237	0.0048662	0.0000010	0.0010141
	15	0.	0.	0.0000005	-0.0006900
	16	0.	0.	0.0000001	-0.0003890

Table 5

Real and Imaginary Parts of the Scattering Coefficients  
 $A(N)$  and  $B(N)$  for the Isotropic, Dielectric, Infinite  
 Circular Cylinder. Refractive Index  $m = 3.000$ .  
 Range of Circumference to Wavelength ratio,  $x = 2\pi a/\lambda$ ;

0.100	(0.030)	3.520
4.000	(0.200)	5.400



NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
0.100	0	-0.	-0.	0.0048958	0.0697987
	1	0.	0.	0.	0.
0.130	0	0.0000001	0.0002289	0.0156689	0.1241910
	1	0.0001155	0.0107470	0.0000001	0.0002289
0.160	0	0.0000003	0.0005311	0.0406512	0.1974810
	1	0.0002672	0.0163448	0.0000003	0.0005311
0.190	0	0.0000011	0.0010706	0.0910613	0.2876960
	1	0.0005358	0.0231409	0.0000011	0.0010706
	2	0.0000000	0.0001022	0.	0.
0.220	0	0.0000038	0.0019564	0.1802410	0.3843880
	1	0.0009709	0.0311437	0.0000038	0.0019564
	2	0.0000000	0.0001837	0.	0.
0.250	0	0.0000111	0.0033269	0.3156220	0.4647630
	1	0.0016313	0.0403562	0.0000111	0.0033269
	2	0.0000001	0.0003063	0.	0.
0.280	0	0.0000287	0.0053569	0.4858970	0.4998010
	1	0.0025847	0.0507739	0.0000287	0.0053569
	2	0.0000002	0.0004819	0.	0.
0.310	0	0.0000684	0.0082676	0.6586500	0.4741630
	1	0.0039070	0.0623835	0.0000684	0.0082676
	2	0.0000005	0.0007238	0.	0.
0.340	0	0.0001523	0.0123404	0.8001770	0.3998680
	1	0.0056815	0.0751614	0.0001523	0.0123404
	2	0.0000011	0.0010472	0.	0.
0.370	0	0.0003218	0.0179369	0.8965380	0.3045610
	1	0.0079979	0.0890726	0.0003218	0.0179369
	2	0.0000022	0.0014684	0.	0.
0.400	0	0.0006521	0.0255271	0.9531040	0.2114160
	1	0.0109504	0.1040690	0.0006521	0.0255271
	2	0.0000040	0.0020056	0.0000000	0.0001432
0.430	0	0.0012784	0.0357315	0.9823170	0.1317960
	1	0.0146363	0.1200920	0.0012784	0.0357315
	2	0.0000072	0.0026785	0.0000000	0.0002236
0.460	0	0.0024444	0.0493807	0.9953060	0.0683508
	1	0.0191542	0.1370670	0.0024444	0.0493807
	2	0.0000123	0.0035082	0.0000001	0.0003394
0.490	0	0.0045914	0.0676039	0.9996130	0.0196771
	1	0.0246024	0.1549100	0.0045914	0.0676039
	2	0.0000204	0.0045179	0.0000002	0.0005029

# NOLTR 62-161

## REFRACTIVE INDEX $M = 3.000$

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
0.520	0	0.0085284	0.0919548	0.9997170	-0.0168319
	1	0.0310772	0.1735260	0.0085284	0.0919548
	2	0.0000329	0.0057323	0.0000005	0.0007297
0.550	0	0.0157684	0.1245780	0.9980810	-0.0437593
	1	0.0386724	0.1928130	0.0157684	0.1245780
	2	0.0000515	0.0071778	0.0000011	0.0010394
0.580	0	0.0292055	0.1683820	0.9959790	-0.0632812
	1	0.0474795	0.2126620	0.0292055	0.1683820
	2	0.0000789	0.0088829	0.0000021	0.0014569
	3	0.0000000	0.0001217	0.	0.
0.610	0	0.0545030	0.2270080	0.9940160	-0.0771247
	1	0.0575891	0.2329650	0.0545030	0.2270080
	2	0.0001183	0.0108779	0.0000041	0.0020136
	3	0.0000000	0.0001644	0.	0.
0.640	0	0.1028480	0.3037610	0.9924370	-0.0866361
	1	0.0690938	0.2536140	0.1028480	0.3037610
	2	0.0001741	0.0131954	0.0000076	0.0027487
	3	0.0000000	0.0002188	0.	0.
0.670	0	0.1955090	0.3965920	0.9913000	-0.0928687
	1	0.0820938	0.2745080	0.1955090	0.3965920
	2	0.0002519	0.0158703	0.0000138	0.0037122
	3	0.0000001	0.0002873	0.	0.
0.700	0	0.3655800	0.4815920	0.9905680	-0.0966606
	1	0.0967045	0.2955550	0.3655800	0.4815920
	2	0.0003588	0.0189396	0.0000247	0.0049668
	3	0.0000001	0.0003728	0.	0.
0.730	0	0.6293600	0.4829760	0.9901620	-0.0986974
	1	0.1130680	0.3166760	0.6293600	0.4829760
	2	0.0005040	0.0224434	0.0000435	0.0065930
	3	0.0000002	0.0004784	0.	0.
0.760	0	0.8962330	0.3049580	0.9899870	-0.0995603
	1	0.1313690	0.3378030	0.8962330	0.3049580
	2	0.0006987	0.0264243	0.0000756	0.0086937
	3	0.0000004	0.0006078	0.	0.
0.790	0	0.9999450	0.0074356	0.9899460	-0.0997638
	1	0.1518550	0.3588800	0.9999450	0.0074356
	2	0.0009575	0.0309284	0.0001300	0.0114026
	3	0.0000006	0.0007649	0.0000000	0.0001181
0.820	0	0.9401140	-0.2372760	0.9899420	-0.0997862
	1	0.1748650	0.3798520	0.9401140	-0.2372760
	2	0.0012981	0.0360052	0.0002219	0.0148950
	3	0.0000009	0.0009544	0.0000000	0.0001612

NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
0.850	0	0.8282790	-0.3771380	0.9898780	-0.1000960
	1	0.2008720	0.4006520	0.8282790	-0.3771380
	2	0.0017426	0.0417082	0.0003767	0.0194048
	3	0.0000014	0.0011813	0.0000000	0.0002179
0.880	0	0.7264350	-0.4457880	0.9896560	-0.1011770
	1	0.2305340	0.4211740	0.7264350	-0.4457880
	2	0.0023185	0.0480954	0.0006379	0.0252493
	3	0.0000021	0.0014514	0.0000001	0.0002921
0.910	0	0.6480980	-0.4775640	0.9891590	-0.1035540
	1	0.2647720	0.4412120	0.6480980	-0.4775640
	2	0.0030597	0.0552300	0.0010815	0.0328685
	3	0.0000031	0.0017709	0.0000001	0.0003883
0.940	0	0.5907740	-0.4916910	0.9882360	-0.1078220
	1	0.3048780	0.4603560	0.5907740	-0.4916910
	2	0.0040079	0.0631811	0.0018428	0.0428878
	3	0.0000046	0.0021469	0.0000003	0.0005124
0.970	0	0.5493910	-0.4975550	0.9866700	-0.1146830
	1	0.3526560	0.4777970	0.5493910	-0.4975550
	2	0.0052148	0.0720248	0.0031711	0.0562232
	3	0.0000067	0.0025873	0.0000004	0.0006717
1.000	0	0.5196250	-0.4996150	0.9841270	-0.1249840
	1	0.4105920	0.4919410	0.5196250	-0.4996150
	2	0.0067441	0.0818452	0.0055457	0.0742629
	3	0.0000096	0.0031005	0.0000008	0.0008752
1.030	0	0.4983000	-0.4999970	0.9800650	-0.1397770
	1	0.4819830	0.4996750	0.4983000	-0.4999970
	2	0.0086753	0.0927365	0.0099384	0.0991950
	3	0.0000137	0.0036962	0.0000013	0.0011343
1.060	0	0.4831600	-0.4997160	0.9735840	-0.1603680
	1	0.5707590	0.4949680	0.4831600	-0.4997160
	2	0.0111073	0.1048040	0.0184627	0.1346170
	3	0.0000192	0.0043847	0.0000021	0.0014631
	4	0.0000000	0.0001008	0.	0.
1.090	0	0.4725950	-0.4992480	0.9631650	-0.1883570
	1	0.6801240	0.4664280	0.4725950	-0.4992480
	2	0.0141644	0.1181680	0.0361492	0.1866610
	3	0.0000268	0.0051778	0.0000035	0.0018794
	4	0.0000000	0.0001256	0.	0.
1.120	0	0.4654380	-0.4988040	0.9462110	-0.2256000
	1	0.8076540	0.3941430	0.4654370	-0.4988040
	2	0.0180043	0.1329670	0.0764130	0.2656580
	3	0.0000371	0.0060882	0.0000058	0.0024056
	4	0.0000000	0.0001555	0.	0.

NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
1.150	0	0.4608140	-0.4984620	0.9183050	-0.2738990
	1	0.9327580	0.2504410	0.4608140	-0.4984620
	2	0.0228290	0.1493580	0.1796670	0.3839100
	3	0.0000508	0.0071300	0.0000094	0.0030703
	4	0.0000000	0.0001914	0.	0.
1.180	0	0.4580520	-0.4982370	0.8720940	-0.3339850
	1	0.9995720	0.0206955	0.4580520	-0.4982370
	2	0.0289013	0.1675290	0.4654190	0.4988030
	3	0.0000692	0.0083189	0.0000153	0.0039099
	4	0.0000001	0.0002343	0.	0.
1.210	0	0.4566080	-0.4981140	0.7962090	-0.4028150
	1	0.9350420	-0.2464510	0.4566080	-0.4981140
	2	0.0365681	0.1876990	0.9518280	0.2141290
	3	0.0000936	0.0096723	0.0000247	0.0049717
	4	0.0000001	0.0002853	0.	0.
1.240	0	0.4560290	-0.4980630	0.6763140	-0.4678820
	1	0.7386400	-0.4393750	0.4560290	-0.4980630
	2	0.0462967	0.2101270	0.8329870	-0.3729870
	3	0.0001257	0.0112094	0.0000399	0.0063176
	4	0.0000001	0.0003458	0.	0.
1.270	0	0.4559120	-0.4980520	0.5040660	-0.4999830
	1	0.5066130	-0.4999560	0.4559120	-0.4980520
	2	0.0587309	0.2351200	0.5094100	-0.4999110
	3	0.0001678	0.0129519	0.0000645	0.0080299
	4	0.0000002	0.0004171	0.0000000	0.0001158
1.300	0	0.4558850	-0.4980500	0.2985740	-0.4576330
	1	0.3199110	-0.4664420	0.4558850	-0.4980500
	2	0.0747801	0.2630360	0.3367570	-0.4726010
	3	0.0002228	0.0149237	0.0001044	0.0102196
	4	0.0000002	0.0005009	0.0000000	0.0001487
1.330	0	0.4555770	-0.4980230	0.1179360	-0.3225320
	1	0.1947110	-0.3959780	0.4555770	-0.4980230
	2	0.0957661	0.2942700	0.2491830	-0.4325400
	3	0.0002943	0.0171521	0.0001701	0.0130404
	4	0.0000004	0.0005991	0.0000000	0.0001902
1.360	0	0.4546040	-0.4979350	0.0181773	-0.1335920
	1	0.1168230	-0.3212090	0.4546040	-0.4979350
	2	0.1236700	0.3292050	0.2006060	-0.4004540
	3	0.0003870	0.0196677	0.0002793	0.0167093
	4	0.0000005	0.0007136	0.0000001	0.0002423
1.390	0	0.4525430	-0.4977430	0.0021758	0.0465946
	1	0.0695338	-0.2543600	0.4525430	-0.4977430
	2	0.1615590	0.3680450	0.1714120	-0.3768690
	3	0.0005068	0.0225056	0.0004643	0.0215435
	4	0.0000007	0.0008468	0.0000001	0.0003077

NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
1.420	0	0.4489090	-0.4973830	0.0353484	0.1846590
	1	0.0409509	-0.1981770	0.4489090	-0.4973830
	2	0.2143200	0.4103500	0.1528360	-0.3598290
	3	0.0006612	0.0257060	0.0007859	0.0280229
	4	0.0000010	0.0010013	0.0000001	0.0003895
1.450	0	0.4431230	-0.4967540	0.0853267	0.2793670
	1	0.0236693	-0.1520170	0.4431230	-0.4967540
	2	0.2898830	0.4537080	0.1405730	-0.3475800
	3	0.0008601	0.0293155	0.0013642	0.0369094
	4	0.0000014	0.0011799	0.0000002	0.0004917
1.480	0	0.4344670	-0.4956870	0.1347830	0.3414920
	1	0.0132479	-0.1143350	0.4344670	-0.4956870
	2	0.4008110	0.4900630	0.1323140	-0.3388320
	3	0.0011160	0.0333886	0.0024547	0.0494841
	4	0.0000019	0.0013858	0.0000004	0.0006193
1.510	0	0.4220320	-0.4938840	0.1771980	0.3818360
	1	0.0070298	-0.0835489	0.4220320	-0.4938840
	2	0.5637870	0.4959150	0.1267240	-0.3326640
	3	0.0014453	0.0379903	0.0046555	0.0680719
	4	0.0000026	0.0016226	0.0000006	0.0007787
1.540	0	0.4046450	-0.4908230	0.2112350	0.4081850
	1	0.0034096	-0.0582921	0.4046450	-0.4908230
	2	0.7827530	0.4123720	0.1229810	-0.3284150
	3	0.0018696	0.0431983	0.0095664	0.0973391
	4	0.0000036	0.0018944	0.0000010	0.0009775
1.570	0	0.3807760	-0.4855780	0.2375370	0.4255740
	1	0.0014040	-0.0374439	0.3807760	-0.4855780
	2	0.9772310	0.1491650	0.1205460	-0.3255990
	3	0.0024174	0.0491075	0.0224159	0.1480320
	4	0.0000049	0.0022055	0.0000015	0.0012260
1.600	0	0.3484520	-0.4764800	0.2573130	0.4371530
	1	0.0004042	-0.0201001	0.3484520	-0.4764800
	2	0.9371800	-0.2426400	0.1190450	-0.3238420
	3	0.0031274	0.0558358	0.0667981	0.2496720
	4	0.0000066	0.0025610	0.0000024	0.0015370
1.630	0	0.3052450	-0.4605110	0.2718000	0.4448870
	1	0.0000306	-0.0055277	0.3052450	-0.4605110
	2	0.6515500	-0.4764800	0.1182070	-0.3228530
	3	0.0040528	0.0635324	0.3252390	0.4684640
	4	0.0000088	0.0029666	0.0000037	0.0019270
1.660	0	0.2485870	-0.4321940	0.2820940	0.4500190
	1	0.0000473	0.0068774	0.2485870	-0.4321940
	2	0.3711030	-0.4831000	0.1178160	-0.3223900
	3	0.0052681	0.0723902	0.8636860	-0.3431220
	4	0.0000117	0.0034284	0.0000058	0.0024179
	5	0.0000000	0.0001153	0.	0.

NOLTR 62-161

REFRACTIVE INDEX  $M = 3.000$

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
1.690	0	0.1771550	-0.3818000	0.2891160	0.4533520
	1	0.0003107	0.0176247	0.1771550	-0.3818000
	2	0.1945520	-0.3958550	0.1176950	-0.3222470
	3	0.0068809	0.0826650	0.2236940	-0.4167190
	4	0.0000156	0.0039536	0.0000092	0.0030387
	5	0.0000000	0.0001373	0.	0.
1.720	0	0.0951079	-0.2933640	0.2936310	0.4554250
	1	0.0007381	0.0271578	0.0951079	-0.2933640
	2	0.0968607	-0.2957680	0.1176850	-0.3222340
	3	0.0090511	0.0947060	0.0983883	-0.2978390
	4	0.0000207	0.0045501	0.0000147	0.0038287
	5	0.0000000	0.0001629	0.	0.
1.750	0	0.0219491	-0.1465180	0.2962800	0.4566160
	1	0.0012888	0.0358771	0.0219491	-0.1465180
	2	0.0445253	-0.2062590	0.1176330	-0.3221740
	3	0.0120266	0.1090040	0.0603112	-0.2380630
	4	0.0000273	0.0052270	0.0000234	0.0048418
	5	0.0000000	0.0001928	0.	0.
1.780	0	0.0043314	0.0656705	0.2976060	0.4572050
	1	0.0019539	0.0441597	0.0043314	0.0656704
	2	0.0173242	-0.1304760	0.1173870	-0.3218810
	3	0.0162088	0.1262780	0.0438537	-0.2047700
	4	0.0000359	0.0059946	0.0000379	0.0061550
	5	0.0000000	0.0002275	0.	0.
1.810	0	0.0964757	0.2979570	0.2980860	0.4574170
	1	0.0027509	0.0523769	0.0984757	0.2979570
	2	0.0044561	-0.0666055	0.1167820	-0.3211610
	3	0.0222883	0.1476190	0.0352536	-0.1844200
	4	0.0000471	0.0068648	0.0000621	0.0078800
	5	0.0000001	0.0002678	0.0000000	0.0001234
1.840	0	0.2979580	0.4573610	0.2981540	0.4574480
	1	0.0037241	0.0609114	0.2979580	0.4573610
	2	0.0001490	-0.0122064	0.1156350	-0.3197860
	3	0.0315429	0.1747800	0.0302339	-0.1712300
	4	0.0000616	0.0078510	0.0001038	0.0101863
	5	0.0000001	0.0003143	0.0000000	0.0001539
1.870	0	0.5176510	0.4996880	0.2982220	0.4574770
	1	0.0049490	0.0701748	0.5176510	0.4996880
	2	0.0012117	0.0347887	0.1137350	-0.3174900
	3	0.0465709	0.2107180	0.0271035	-0.1623850
	4	0.0000805	0.0089693	0.0001781	0.0133429
	5	0.0000001	0.0003680	0.0000000	0.0001916

NOLTR 62-161

REFRACTIVE INDEX  $M = 3.000$

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
1.900	0	0.6892330	0.4628080	0.2987010	0.4576890
	1	0.0065438	0.0806285	0.6892330	0.4628080
	2	0.0058039	0.0759616	0.1108380	-0.3139310
	3	0.0733544	0.2607170	0.0250770	-0.1563590
	4	0.0001048	0.0102381	0.0003170	0.0178031
	5	0.0000002	0.0004299	0.0000001	0.0002384
1.930	0	0.8020910	0.3984230	0.3000290	0.4582700
	1	0.0086886	0.0928070	0.8020910	0.3984230
	2	0.0128185	0.1124910	0.1066500	-0.3086680
	3	0.1281910	0.3343020	0.0237447	-0.1522530
	4	0.0001364	0.0116796	0.0005954	0.0243936
	5	0.0000002	0.0005009	0.0000001	0.0002964
1.960	0	0.8714730	0.3346750	0.3026910	0.4594230
	1	0.0116593	0.1073470	0.8714730	0.3346750
	2	0.0215641	0.1452550	0.1008240	-0.3010960
	3	0.2663150	0.4420310	0.0228727	-0.1494980
	4	0.0001775	0.0133203	0.0012122	0.0347955
	5	0.0000003	0.0005825	0.0000001	0.0003684
1.990	0	0.9135210	0.2810700	0.3072640	0.4613600
	1	0.0158830	0.1250230	0.9135210	0.2810700
	2	0.0315954	0.1749200	0.0929513	-0.2903640
	3	0.6858250	0.4641870	0.0223168	-0.1477120
	4	0.0002309	0.0151926	0.0028194	0.0530232
	5	0.0000005	0.0006759	0.0000002	0.0004579
2.020	0	0.9392370	0.2388940	0.3144600	0.4643010
	1	0.0220315	0.1467860	0.9392370	0.2388940
	2	0.0426206	0.2020000	0.0825709	-0.2752330
	3	0.8690430	-0.3373540	0.0219816	-0.1466230
	4	0.0003006	0.0173367	0.0084500	0.0915347
	5	0.0000006	0.0007827	0.0000003	0.0005696
2.050	0	0.9552420	0.2067710	0.3251980	0.4684490
	1	0.0311789	0.1738010	0.9552420	0.2067710
	2	0.0544492	0.2269020	0.0692233	-0.2538330
	3	0.2786680	-0.4483440	0.0217995	-0.1460280
	4	0.0003923	0.0198036	0.0486182	0.2150680
	5	0.0000008	0.0009047	0.0000005	0.0007093
2.080	0	0.9653860	0.1828010	0.3407010	0.4739450
	1	0.0450690	0.2074550	0.9653860	0.1828010
	2	0.0669623	0.2499570	0.0526179	-0.2232690
	3	0.0935233	-0.2911640	0.0217188	-0.1457640
	4	0.0005137	0.0226594	0.6640680	-0.4723150
	5	0.0000011	0.0010439	0.0000008	0.0008848

# MOLTR 62-161

## REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.110	0	0.9719060	0.1652420	0.3626470	0.4807640
	1	0.0665636	0.2492650	0.9719060	0.1652420
	2	0.0800962	0.2714420	0.0331158	-0.1789390
	3	0.0362768	-0.1869780	0.0216967	-0.1456910
	4	0.0006760	0.0259921	0.0414529	-0.1993350
	5	0.0000014	0.0012026	0.0000012	0.0011067
2.140	0	0.9761250	0.1526580	0.3933620	0.4884960
	1	0.1003680	0.3004900	0.9761250	0.1526580
	2	0.0938336	0.2915970	0.0130520	-0.1134970
	3	0.0142273	-0.1184270	0.0216951	-0.1456860
	4	0.0008961	0.0299223	0.0151543	-0.1221670
	5	0.0000019	0.0013832	0.0000019	0.0013893
2.170	0	0.9788430	0.1439090	0.4360610	0.4958950
	1	0.1540550	0.3610010	0.9788430	0.1439090
	2	0.1082000	0.3106330	0.0002493	-0.0157888
	3	0.0047737	-0.0689267	0.0216773	-0.1456280
	4	0.0012001	0.0346220	0.0087773	-0.0932752
	5	0.0000025	0.0015888	0.0000031	0.0017524
2.200	0	0.9805530	0.1380890	0.4950350	0.4999750
	1	0.2389470	0.4264400	0.9805530	0.1380890
	2	0.1232660	0.3287420	0.0165055	0.1274090
	3	0.0009072	-0.0301066	0.0216056	-0.1453920
	4	0.0016305	0.0403465	0.0062265	-0.0786623
	5	0.0000033	0.0018226	0.0000049	0.0022246
2.230	0	0.9815790	0.1344690	0.5753400	0.4942910
	1	0.3686350	0.4824350	0.9815790	0.1344690
	2	0.1391460	0.3460990	0.1113130	0.3145190
	3	0.0000057	0.0023856	0.0214397	-0.1448450
	4	0.0022610	0.0474961	0.0049442	-0.0701409
	5	0.0000044	0.0020885	0.0000081	0.0028480
2.260	0	0.9821370	0.1324540	0.6807670	0.4661800
	1	0.5491830	0.4975750	0.9821370	0.1324540
	2	0.1560120	0.3628660	0.3478420	0.4762860
	3	0.0009606	0.0309794	0.0211348	-0.1438340
	4	0.0032298	0.0567396	0.0042137	-0.0647762
	5	0.0000057	0.0023910	0.0000136	0.0036875
2.290	0	0.9823880	0.1315360	0.8073180	0.3944050
	1	0.7564390	0.4292310	0.9823880	0.1315360
	2	0.1740970	0.3791930	0.6806520	0.4662240
	3	0.0032736	0.0571217	0.0206401	-0.1421760
	4	0.0048249	0.0692940	0.0037666	-0.0612568
	5	0.0000075	0.0027353	0.0000235	0.0048482
	6	0.0000000	0.0001135	0.	0.



NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.320	0	0.9824600	0.1312730	0.9303500	0.2545570
	1	0.9252280	0.2630230	0.9824600	0.1312730
	2	0.1937150	0.3952080	0.9191960	0.2725330
	3	0.0067237	0.0817220	0.0198976	-0.1396480
	4	0.0077406	0.0876397	0.0034821	-0.0589069
	5	0.0000098	0.0031274	0.0000424	0.0065119
	6	0.0000000	0.0001322	0.	0.
2.350	0	0.9824650	0.1312540	0.9979900	0.0447900
	1	0.9976400	0.0485269	0.9824650	0.1312540
	2	0.2152820	0.4110180	0.9972900	0.0519885
	3	0.0112302	0.1053760	0.0188417	-0.1359660
	4	0.0140605	0.1177410	0.0032988	-0.0573402
	5	0.0000128	0.0035748	0.0000814	0.0090219
	6	0.0000000	0.0001535	0.0000000	0.0001080
2.380	0	0.9825110	0.1310830	0.9646470	-0.1846710
	1	0.9789740	-0.1434710	0.9825110	0.1310830
	2	0.2393420	0.4266820	0.9877220	-0.1101250
	3	0.0167906	0.1284860	0.0173995	-0.1307550
	4	0.0328503	0.1782450	0.0031818	-0.0563173
	5	0.0000167	0.0040861	0.0001720	0.0131142
	6	0.0000000	0.0001781	0.0000000	0.0001336
2.410	0	0.9827080	0.1303580	0.8450030	-0.3619010
	1	0.9135990	-0.2809550	0.9827080	0.1303580
	2	0.2666080	0.4421860	0.9515900	-0.2146300
	3	0.0234504	0.1513290	0.0154953	-0.1235120
	4	0.1527330	0.3597300	0.0031098	-0.0556789
	5	0.0000218	0.0046722	0.0004286	0.0206992
	6	0.0000000	0.0002062	0.0000000	0.0001653
2.440	0	0.9831680	0.1286400	0.6975600	-0.4593150
	1	0.8379980	-0.3684530	0.9831680	0.1286400
	2	0.2980150	0.4573860	0.9137930	-0.2806690
	3	0.0312885	0.1740960	0.0130614	-0.1135370
	4	0.4878640	-0.4998530	0.0030688	-0.0553122
	5	0.0000286	0.0053465	0.0015039	0.0387507
	6	0.0000001	0.0002384	0.0000000	0.0002049
2.470	0	0.9840110	0.1254340	0.5661620	-0.4956030
	1	0.7692670	-0.4213020	0.9840110	0.1254340
	2	0.3347820	0.4719140	0.8816000	-0.3230810
	3	0.0404095	0.1969180	0.0100672	-0.0998292
	4	0.0379865	-0.1911640	0.0030488	-0.0551313
	5	0.0000375	0.0061260	0.0166796	0.1280680
	6	0.0000001	0.0002753	0.0000001	0.0002545

NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.500	0	0.9853500	0.1201470	0.4645230	-0.4987400
	1	0.7123570	-0.4526640	0.9853500	0.1201470
	2	0.3784900	0.4850110	0.8561160	-0.3509730
	3	0.0509412	0.2198780	0.0065887	-0.0809032
	4	0.0093458	-0.0962208	0.0030416	-0.0550668
	5	0.0000495	0.0070330	0.0212405	-0.1441850
	6	0.0000001	0.0003174	0.0000001	0.0003170
2.530	0	0.9872860	0.1120370	0.3904080	-0.4878420
	1	0.6671170	-0.4712450	0.9872860	0.1120370
	2	0.4311330	0.4952350	0.8366370	-0.3696970
	3	0.0630336	0.2430230	0.0029775	-0.0544849
	4	0.0029780	-0.0544894	0.0030406	-0.0550580
	5	0.0000656	0.0080974	0.0029784	-0.0544938
	6	0.0000001	0.0003654	0.0000002	0.0003963
2.560	0	0.9898670	0.1001520	0.3374920	-0.4728540
	1	0.6318250	-0.4823090	0.9898670	0.1001520
	2	0.4950890	0.4999760	0.8220910	-0.3824360
	3	0.0768613	0.2663710	0.0002879	-0.0169660
	4	0.0008795	-0.0296441	0.0030395	-0.0550481
	5	0.0000876	0.0093604	0.0013312	-0.0364611
	6	0.0000002	0.0004203	0.0000002	0.0004979
2.590	0	0.9930260	0.0832203	0.2999220	-0.4582240
	1	0.6045570	-0.4889460	0.9930260	0.0832203
	2	0.5728120	0.4946700	0.8114660	-0.3911380
	3	0.0926266	0.2899080	0.0014109	0.0375359
	4	0.0001443	-0.0120138	0.0030320	-0.0549805
	5	0.0001184	0.0108816	0.0008386	-0.0289466
	6	0.0000002	0.0004828	0.0000004	0.0006293
2.620	0	0.9964450	0.0595202	0.2732930	-0.4456500
	1	0.5836150	-0.4929590	0.9964450	0.0595202
	2	0.6658100	0.4717070	0.8039100	-0.3970370
	3	0.1105650	0.3135930	0.0142566	0.1185470
	4	0.0000041	0.0020347	0.0030116	-0.0547950
	5	0.0001626	0.0127513	0.0006232	-0.0249558
	6	0.0000003	0.0005542	0.0000006	0.0008020
2.650	0	0.9992870	0.0266918	0.2544900	-0.4355740
	1	0.5676120	-0.4954070	0.9992870	0.0266918
	2	0.7721120	0.4194700	0.7987290	-0.4009500
	3	0.1309530	0.3373490	0.0609713	0.2392780
	4	0.0002011	0.0141797	0.0029708	-0.0544245
	5	0.0002285	0.0151139	0.0005098	-0.0225729
	6	0.0000004	0.0006356	0.0000011	0.0010329

# NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.680	0	0.9996590	-0.0184583	0.2413440	-0.4278990
	1	0.5554420	-0.4969170	0.9996590	-0.0184583
	2	0.8813800	0.3233410	0.7953630	-0.4034360
	3	0.1541200	0.3610630	0.2011820	0.4008840
	4	0.0006412	0.0253140	0.0029019	-0.0537912
	5	0.0003321	0.0182194	0.0004437	-0.0210589
	6	0.0000005	0.0007285	0.0000018	0.0013495
2.710	0	0.9935560	-0.0800148	0.2323340	-0.4223210
	1	0.5462200	-0.4978590	0.9935560	-0.0800148
	2	0.9692120	0.1727420	0.7933500	-0.4049020
	3	0.1804570	0.3845670	0.5362540	0.4986840
	4	0.0012953	0.0359670	0.0027958	-0.0528014
	5	0.0005085	0.0225449	0.0004029	-0.0200675
	6	0.0000007	0.0008346	0.0000032	0.0017979
2.740	0	0.9729230	-0.1623080	0.2263650	-0.4184780
	1	0.5392280	-0.4984590	0.9729230	-0.1623080
	2	0.9994530	-0.0233764	0.7923040	-0.4056580
	3	0.2104380	0.4076200	0.9306920	0.2539760
	4	0.0021653	0.0464826	0.0026427	-0.0513397
	5	0.0008496	0.0291358	0.0003770	-0.0194135
	6	0.0000009	0.0009560	0.0000061	0.0024628
2.770	0	0.9227640	-0.2669650	0.2226290	-0.4160110
	1	0.5338720	-0.4988510	0.9227640	-0.2669650
	2	0.9461710	-0.2256790	0.7918920	-0.4059550
	3	0.2446400	0.4298740	0.9741220	-0.1587710
	4	0.0032714	0.0571028	0.0024324	-0.0492593
	5	0.0016698	0.0408296	0.0003607	-0.0189880
	6	0.0000012	0.0010951	0.0000124	0.0035181
2.800	0	0.8197170	-0.3844230	0.2205040	-0.4145860
	1	0.5296400	-0.4991210	0.8197170	-0.3844230
	2	0.8207330	-0.3835760	0.7918140	-0.4060110
	3	0.2837630	0.4508230	0.8218160	-0.3826670
	4	0.0046472	0.0680120	0.0021548	-0.0463699
	5	0.0047865	0.0690188	0.0003506	-0.0187217
	6	0.0000016	0.0012548	0.0000290	0.0053854
2.830	0	0.6423120	-0.4793200	0.2194870	-0.4138990
	1	0.5260770	-0.4993200	0.6423120	-0.4793200
	2	0.6650220	-0.4719830	0.7917890	-0.4060280
	3	0.3286500	0.4697230	0.6823560	-0.4655600
	4	0.0063382	0.0793603	0.0018025	-0.0424180
	5	0.0709000	0.2566580	0.0003448	-0.0185669
	6	0.0000021	0.0014389	0.0000887	0.0094188

NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
2.860	0	0.4056910	-0.4910250	0.2191540	-0.4136730
	1	0.5227580	-0.4994820	0.4056910	-0.4910250
	2	0.5177980	-0.4996830	0.7915390	-0.4062080
	3	0.3803030	0.4854610	0.5859820	-0.4925520
	4	0.0084024	0.0912789	0.0013751	-0.0370576
	5	0.0123824	-0.1105850	0.0003419	-0.0184885
	6	0.0000027	0.0016519	0.0005603	0.0236633
2.890	0	0.1841900	-0.3876390	0.2191200	-0.4136500
	1	0.5192650	-0.4996290	0.1841900	-0.3876390
	2	0.3971050	-0.4892980	0.7907720	-0.4067570
	3	0.4398540	0.4963690	0.5216050	-0.4995330
	4	0.0109120	0.1038890	0.0008890	-0.0298023
	5	0.0015739	-0.0396413	0.0003408	-0.0184586
	6	0.0000036	0.0018998	0.0124133	-0.1107210
2.920	0	0.0488784	-0.2156140	0.2190210	-0.4135830
	1	0.5151670	-0.4997700	0.0488784	-0.2156140
	2	0.3049720	-0.4603960	0.7891630	-0.4079030
	3	0.5084620	0.4999280	0.4780260	-0.4995170
	4	0.0139558	0.1173070	0.0003980	-0.0199469
	5	0.0004017	-0.0200390	0.0003406	-0.0184534
	6	0.0000048	0.0021905	0.0004059	-0.0201418
2.950	7	0.	0.	0.0000000	0.0001128
	0	0.0021554	-0.0463763	0.2184870	-0.4132190
	1	0.5099930	-0.4999000	0.0021554	-0.0463763
	2	0.2367600	-0.4250930	0.7863320	-0.4098950
	3	0.5870270	0.4923680	0.4479700	-0.4972850
	4	0.0176438	0.1316530	0.0000413	-0.0064294
	5	0.0001026	-0.0101280	0.0003406	-0.0184510
2.980	6	0.0000064	0.0025349	0.0001494	-0.0122232
	7	0.0000000	0.0001111	0.0000000	0.0001414
	0	0.0074203	0.0858212	0.2171270	-0.4122900
	1	0.5032100	-0.4999900	0.0074203	0.0858212
	2	0.1866700	-0.3896470	0.7818050	-0.4130200
	3	0.6755260	0.4681780	0.4269550	-0.4946360
	4	0.0221123	0.1470490	0.0001543	0.0124196
3.010	5	0.0000131	-0.0036185	0.0003398	-0.0184296
	6	0.0000087	0.0029482	0.0000873	-0.0093442
	7	0.0000000	0.0001278	0.0000000	0.0001784
	0	0.0333043	0.1794300	0.2145110	-0.4104820
	1	0.4941840	-0.4999660	0.0333043	0.1794300
	2	0.1497560	-0.3568320	0.7749710	-0.4176010
	3	0.7716760	0.4197530	0.4121800	-0.4922270
	4	0.0275310	0.1636250	0.0015516	0.0393603
	5	0.0000019	0.0013764	0.0003374	-0.0183665
	6	0.0000119	0.0034532	0.0000624	-0.0079016
	7	0.0000000	0.0001467	0.0000000	0.0002267

NOLTR 62-161

REFRACTIVE INDEX  $M = 3.000$

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.040	0	0.0633270	0.2435500	0.2101460	-0.4074120
	1	0.4821410	-0.4996810	0.0633270	0.2435500
	2	0.1222870	-0.3276170	0.7650030	-0.4239970
	3	0.8685840	0.3378550	0.4018300	-0.4902680
	4	0.0341143	0.1815230	0.0063173	0.0792298
	5	0.0000317	0.0056268	0.0003327	-0.0182360
	6	0.0000167	0.0040863	0.0000499	-0.0070669
	7	0.0000000	0.0001686	0.0000001	0.0002917
3.070	0	0.0907641	0.2872730	0.2034600	-0.4025720
	1	0.4661040	-0.4988500	0.0907641	0.2872730
	2	0.1015840	-0.3021000	0.7507430	-0.4325830
	3	0.9517070	0.2143850	0.3946850	-0.4887830
	4	0.0421341	0.2008950	0.0202928	0.1410000
	5	0.0000905	0.0095119	0.0003244	-0.0180091
	6	0.0000241	0.0049082	0.0000429	-0.0065469
	7	0.0000000	0.0001935	0.0000001	0.0003805
3.100	0	0.1135430	0.3172560	0.1937820	-0.3952600
	1	0.4448270	-0.4969470	0.1135430	0.3172560
	2	0.0857542	-0.2800010	0.7305200	-0.4436900
	3	0.9975680	0.0492557	0.3898920	-0.4877250
	4	0.0519407	0.2219070	0.0621927	0.2415050
	5	0.0001755	0.0132462	0.0003117	-0.0176511
	6	0.0000364	0.0060321	0.0000386	-0.0062109
	7	0.0000000	0.0002221	0.0000003	0.0005062
3.130	0	0.1314990	0.3379460	0.1803300	-0.3844620
	1	0.4167050	-0.4930130	0.1314990	0.3379460
	2	0.0734608	-0.2608910	0.7018670	-0.4574380
	3	0.9799640	-0.1401220	0.3868290	-0.4870240
	4	0.0659906	0.2447360	0.2013900	0.4010390
	5	0.0002879	0.0169655	0.0002932	-0.0171199
	6	0.0000592	0.0076970	0.0000359	-0.0059913
	7	0.0000001	0.0002549	0.0000005	0.0006922
3.160	0	0.1451500	0.3522520	0.1622270	-0.3686590
	1	0.3797090	-0.4853140	0.1451500	0.3522520
	2	0.0637509	-0.2443090	0.6610800	-0.4733430
	3	0.8867580	-0.3168880	0.3850260	-0.4866010
	4	0.0788871	0.2695630	0.6482110	0.4775290
	5	0.0004314	0.0207652	0.0002678	-0.0163627
	6	0.0001106	0.0105156	0.0000342	-0.0058496
	7	0.0000001	0.0002926	0.0000010	0.0009865
3.190	0	0.1551910	0.3620870	0.1385970	-0.3455260
	1	0.3314250	-0.4707260	0.1551910	0.3620870
	2	0.0559370	-0.2298000	0.6026400	-0.4893520
	3	0.7345900	-0.4415510	0.3841050	-0.4863830
	4	0.0974397	0.2965560	0.9820080	-0.1329230
	5	0.0006114	0.0247186	0.0002345	-0.0153127
	6	0.0002786	0.0166892	0.0000332	-0.0057616
	7	0.0000001	0.0003360	0.0000023	0.0015040

# NOLTR 62-161

## REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.220	0	0.1623090	0.3687340	0.1088530	-0.3114540
	1	0.2694670	-0.4436830	0.1623090	0.3687340
	2	0.0495136	-0.2169380	0.5187860	-0.4996470
	3	0.5611750	-0.4962430	0.3837540	-0.4862990
	4	0.1207510	0.3258380	0.6332110	-0.4819280
	5	0.0008352	0.0288877	0.0001928	-0.0138832
	6	0.0020103	0.0447913	0.0000326	-0.0057109
	7	0.0000001	0.0003861	0.0000068	0.0026083
3.250	0	0.1671180	0.3730810	0.0734605	-0.2608910
	1	0.1929810	-0.3946380	0.1671180	0.3730810
	2	0.0441015	-0.2053210	0.4007710	-0.4900550
	3	0.4013000	-0.4901620	0.3836930	-0.4862850
	4	0.1503450	0.3574100	0.4018600	-0.4902740
	5	0.0011120	0.0333288	0.0001430	-0.0119593
	6	0.0021836	-0.0466775	0.0000323	-0.0056855
	7	0.0000002	0.0004443	0.0000405	0.0063632
3.280	0	0.1701510	0.3757650	0.0357627	-0.1856980
	1	0.1067290	-0.3087680	0.1701510	0.3757650
	2	0.0394096	-0.1945670	0.2469210	-0.4312200
	3	0.2724750	-0.4452330	0.3836650	-0.4862780
	4	0.1883540	0.3909950	0.2908170	-0.4541390
	5	0.0014535	0.0380968	0.0000881	-0.0093856
	6	0.0001624	-0.0127442	0.0000322	-0.0056761
	7	0.0000003	0.0005121	0.0017644	-0.0419673
3.310	0	0.1718680	0.3772650	0.0057627	-0.0756934
	1	0.0293323	-0.1687360	0.1718680	0.3772650
	2	0.0352088	-0.1843070	0.0862596	-0.2807470
	3	0.1770690	-0.3817270	0.3834090	-0.4862170
	4	0.2377740	0.4257200	0.2322430	-0.4222630
	5	0.0018739	0.0432478	0.0000354	-0.0059465
	6	0.0000355	-0.0059557	0.0000322	-0.0056746
	7	0.0000004	0.0005918	0.0000356	-0.0059656
3.340	0	0.1726700	0.3779610	0.0058192	0.0760617
	1	0.0008835	0.0297110	0.1726700	0.3779610
	2	0.0313148	-0.1741670	0.0007888	-0.0280737
	3	0.1101030	-0.3130180	0.3826560	-0.4860350
	4	0.3027790	0.4594600	0.1981190	-0.3985820
	5	0.0023912	0.0488419	0.0000018	-0.0013329
	6	0.0000077	-0.0027776	0.0000322	-0.0056736
	7	0.0000005	0.0006863	0.0000127	-0.0035571
3.370	0	0.1729150	0.3781740	0.0714789	0.2576230
	1	0.0668983	0.2498460	0.1729150	0.3781740
	2	0.0275770	-0.1637570	0.0620010	0.2411570
	3	0.0648649	-0.2462870	0.3811070	-0.4856590
	4	0.3889130	0.4875030	0.1767730	-0.3814770
	5	0.0030282	0.0549455	0.0000241	0.0049126
	6	0.0000006	-0.0007475	0.0000321	-0.0056658
	7	0.0000006	0.0007999	0.0000073	-0.0027036

NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
3.400	0	0.1729350	0.3781910	0.2283070	0.4197410
	1	0.2269680	0.4188720	0.1729350	0.3781910
	2	0.0238732	-0.1526540	0.2256850	0.4180330
	3	0.0353754	-0.1847270	0.3784160	-0.4849920
	4	0.5025120	0.4999940	0.1627780	-0.3691630
	5	0.0038133	0.0616339	0.0001822	0.0134978
	6	0.0000006	0.0007990	0.0000318	-0.0056432
	7	0.0000009	0.0009389	0.0000052	-0.0022804
3.430	0	0.1730490	0.3782900	0.4480430	0.4972930
	1	0.4205830	0.4936530	0.1730490	0.3782900
	2	0.0201104	-0.1403780	0.3973090	0.4893410
	3	0.0170196	-0.1293440	0.3741700	-0.4839080
	4	0.6472930	0.4778130	0.1533360	-0.3603110
	5	0.0047831	0.0689944	0.0006546	0.0255760
	6	0.0000045	0.0021185	0.0000313	-0.0055973
	7	0.0000012	0.0011132	0.0000041	-0.0020374
3.460	0	0.1735820	0.3787500	0.6577040	0.4744780
	1	0.5884610	0.4921120	0.1735820	0.3787500
	2	0.0162321	-0.1263670	0.5318790	0.4989830
	3	0.0064543	-0.0800787	0.3678540	-0.4822210
	4	0.8134790	0.3895270	0.1468820	-0.3539880
	5	0.0059849	0.0771302	0.0018660	0.0431565
	6	0.0000111	0.0033339	0.0000305	-0.0055182
	7	0.0000018	0.0013394	0.0000036	-0.0018868
3.490	0	0.1748850	0.3798690	0.8089920	0.3930960
	1	0.7108900	0.4533490	0.1748850	0.3798690
	2	0.0122366	-0.1099400	0.6268670	0.4836370
	3	0.0013273	-0.0364085	0.3588140	-0.4796530
	4	0.9569710	0.2029230	0.1424720	-0.3495340
	5	0.0074804	0.0861654	0.0049318	0.0700534
	6	0.0000204	0.0045135	0.0000291	-0.0053939
	7	0.0000027	0.0016486	0.0000032	-0.0017902
3.520	0	0.1777610	0.3819740	0.9007000	0.2990640
	1	0.7935630	0.4047480	0.1773610	0.3819740
	2	0.0082127	-0.0902512	0.6919840	0.4616730
	3	0.0000055	0.0023460	0.3462010	-0.4757580
	4	0.9953520	-0.0680144	0.1395060	-0.3464740
	5	0.0093519	0.0962518	0.0132580	0.1143780
	6	0.0000325	0.0057004	0.0000271	-0.0052104
	7	0.0000044	0.0021067	0.0000030	-0.0017275
3.520	8	0.	0.	0.0000000	0.0001988

# NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.000	0	0.7734290	-0.4186130	0.9992000	-0.0282677
	1	0.9618960	0.1914480	0.7734290	-0.4186130
	2	0.9593610	-0.1974530	0.8351620	0.3710350
	3	0.1681510	0.3740000	0.9994480	-0.0234948
	4	0.0339991	0.1812270	0.1037220	-0.3049000
	5	0.4608770	-0.4984670	0.0374033	-0.1897480
	6	0.0020668	0.0454150	0.0238273	0.1525110
	7	0.0000091	0.0030232	0.0000012	-0.0011158
	8	0.0000338	0.0058130	0.0000002	-0.0004549
	9	0.	0.	0.0000001	0.0002616
4.200	0	0.3579950	-0.4794110	0.9911510	-0.0936528
	1	0.9911740	0.0935307	0.3579950	-0.4794110
	2	0.7888140	-0.4081500	0.9106160	0.2852970
	3	0.6203040	0.4853110	0.9802840	-0.1390240
	4	0.1548930	0.3618030	0.0311139	0.1736260
	5	0.0028906	-0.0536864	0.0368081	-0.1882900
	6	0.0121801	0.1096890	0.0131646	-0.1139790
	7	0.0000494	0.0070262	0.0000057	0.0023825
	8	0.0000001	0.0002292	0.0000002	-0.0004448
	9	0.	0.	0.0000000	-0.0001474
4.400	0	0.3161740	-0.4649820	0.6098690	-0.4877790
	1	0.6335500	-0.4818340	0.3161740	-0.4649820
	2	0.7374500	-0.4400200	0.6603150	-0.4736020
	3	0.7869360	-0.4080640	0.9785060	-0.1450250
	4	0.3768300	0.4845920	0.8530420	-0.3540640
	5	0.0211656	0.1439360	0.0289200	-0.1675820
	6	0.8130570	-0.3898660	0.0082042	-0.0902048
	7	0.0002246	0.0149850	0.0015977	0.0399394
	8	0.0000009	0.0009688	0.0000001	-0.0002610
	9	0.0000009	-0.0009470	0.0000000	-0.0001212
	10	0.	0.	0.0000000	0.0001566
4.600	0	0.3055110	-0.4606230	0.0903532	0.2866870
	1	0.0281113	0.1652910	0.3055110	-0.4606230
	2	0.6759290	-0.4680270	0.0030278	0.0549420
	3	0.3292090	-0.4699260	0.9632620	-0.1881180
	4	0.8425230	0.3642500	0.6994000	-0.4585190
	5	0.1172200	0.3216820	0.0026144	0.0510646
	6	0.0007644	-0.0276371	0.0080120	-0.0891506
	7	0.0012295	0.0350424	0.0027709	-0.0525660
	8	0.0000050	0.0022391	0.0000008	0.0009204
	9	0.	0.	0.0000000	-0.0001170



# NOLTR 62-161

REFRACTIVE INDEX M= 3.000

X	N	RE A(N)	IM A(N)	RE B(N)	IM B(N)
4.800	0	0.1553680	-0.3622550	0.2547610	0.4357270
	1	0.1161260	0.3203760	0.1553680	-0.3622550
	2	0.3358790	-0.4722970	0.0331100	0.1789240
	3	0.2088330	-0.4064750	0.6402480	-0.4799280
	4	0.6434290	-0.4789860	0.6869870	-0.4637200
	5	0.3663440	0.4823550	0.6462460	-0.4781340
	6	0.0062296	0.0786816	0.0063391	-0.0793659
	7	0.1060060	0.3078460	0.0014643	-0.0382387
	8	0.0000231	0.0048069	0.0001386	0.0117731
	9	0.0000001	0.0003026	0.	0.
5.000	0	0.4390970	0.4962770	0.2691910	0.4435390
	1	0.1279460	0.3340290	0.4390970	0.4962770
	2	0.3389710	0.4733600	0.0355771	0.1852330
	3	0.1417370	-0.3487800	0.2704200	0.4441770
	4	0.0953311	-0.2936720	0.6701060	-0.4701740
	5	0.9144600	0.2796830	0.3728670	-0.4835670
	6	0.0398301	0.1955600	0.0001865	0.0136549
	7	0.0001534	-0.0123858	0.0014171	-0.0376179
	8	0.0001229	0.0110866	0.0004786	-0.0218707
	9	0.0000005	0.0006970	0.0000001	0.0003406
5.200	0	0.9790190	0.1433200	0.3006200	0.4585280
	1	0.1663710	0.3724140	0.9790190	0.1433200
	2	0.7828890	0.4122790	0.0608939	0.2391360
	3	0.0247289	-0.1552980	0.5392030	0.4984610
	4	0.0076574	-0.0871707	0.4614280	-0.4985100
	5	0.4966070	-0.4999860	0.3527270	-0.4778190
	6	0.1701390	0.3757550	0.5580400	-0.4966200
	7	0.0012436	0.0352458	0.0011193	-0.0334379
	8	0.0039536	0.0627549	0.0002186	-0.0147832
	9	0.0000023	0.0015100	0.0000134	0.0036661
5.400	0	0.9961880	0.0616234	0.6555220	0.4751980
	1	0.5902110	0.4917950	0.9961880	0.0616234
	2	0.8414920	0.3652160	0.5111540	0.4998760
	3	0.5091210	0.4999170	0.5625030	0.4960780
	4	0.0027133	0.0520190	0.5069400	0.4999520
	5	0.0257791	-0.1584760	0.3461420	-0.4757390
	6	0.7841660	0.4113990	0.1610900	-0.3676140
	7	0.0081203	0.0897460	0.0000179	0.0042337
	8	0.0000226	-0.0047582	0.0002099	-0.0144861
	9	0.0000121	0.0034813	0.0000684	-0.0082708
	10	0.0000000	0.0002131	0.0000000	0.0001219

NOLTR 62-161

DISTRIBUTION

	Copies
Chief, Bureau of Naval Weapons Attn: Library, DIS-3 Washington 25, D. C.	4
Armed Services Technical Information Agency Arlington Hall Arlington, Virginia	10
Office of Naval Research Washington 25, D. C.	2
Office of Technical Services Department of Commerce Washington 25, D. C.	100
Clarkson College of Technology Physics Department Potsdam, New York Attn: Dr. Milton Kerker	1
Rensselaer Polytechnic Institute Physics Department Troy, New York Attn: Dr. J. Mayo Greenberg Mr. Arthur Lind	1 1
The Ohio Oil Co. Research Center Littleton, Colorado attn: Dr. B. K. Larkin	1
Rensselaer Polytechnic Institute Department of Physics and Astronomy Troy, New York Attn: Dr. Alan Meltzer	1

# CATALOGING INFORMATION FOR LIBRARY USE

## BIBLIOGRAPHIC INFORMATION

	DESCRIPTORS	CODES	DESCRIPTORS	CODES
SOURCE	NOL Technical report	NOLTR	Unclassified - 17	U017
REPORT NUMBER	62-161	620161		
REPORT DATE	24 September 1962	0962		

## SUBJECT ANALYSIS OF REPORT

	DESCRIPTORS	CODES	DESCRIPTORS	CODES
Scattering	SCAT	7090		
Light	LIGT	Computer		
Dielectric	DIEL	Program		
Cylinders	CYLI	Tables		
Normal	NORM	Measurements		
Incidence	INCD			
Coefficients	COEF			
Refractive index	REFT			
Electromagnetic	ELEM			
Radiation	RADT			
Isotropic	ISOR			
IBM	IBMA			

<p>Naval Ordnance Laboratory, White Oak, Md. (NOL technical report 62-161) SCATTERING OF LIGHT AT NORMAL INCIDENCE BY DIELECTRIC CYLINDERS WITH REFRACTIVE INDEX IN THE RANGE <math>m = 1.400</math> to <math>m = 3.00</math>— SCATTERING COEFFICIENTS (U), by Louis F. Libelo. 24 Sept. 1962. 122p. tables. UNCLASSIFIED</p> <p>For the refractive indexes <math>m = 1.40, 1.50, 1.60, 2.00</math>, and <math>3.00</math>, tables of complex scattering coefficients are presented. Coefficients arise in problem of scattering by homogeneous, isotropic, dielectric, infinite circular cylinder of normally incident, linearly polarized, plane electromagnetic radiation. Tables contain not only scattering coefficients for incident plane wave polarized parallel to cylinder axis, but also those for incident radiation polarized normal to this axis.</p>	<ol style="list-style-type: none"> <li>1. Light - Scattering</li> <li>2. Light - Refraction</li> <li>3. Cylinders, Dielectric</li> <li>4. Radiation, Electro-magnetic</li> <li>5. Scattering - Measurements</li> </ol> <p>I. Title II. Libelo, Louis F.</p> <p>Abstract card is unclassified.</p>
<p>Naval Ordnance Laboratory, White Oak, Md. (NOL technical report 62-161) SCATTERING OF LIGHT AT NORMAL INCIDENCE BY DIELECTRIC CYLINDERS WITH REFRACTIVE INDEX IN THE RANGE <math>m = 1.400</math> to <math>m = 3.00</math>— SCATTERING COEFFICIENTS (U), by Louis F. Libelo. 24 Sept. 1962. 122p. tables. UNCLASSIFIED</p> <p>For the refractive indexes <math>m = 1.40, 1.50, 1.60, 2.00</math>, and <math>3.00</math>, tables of complex scattering coefficients are presented. Coefficients arise in problem of scattering by homogeneous, isotropic, dielectric, infinite circular cylinder of normally incident, linearly polarized, plane electromagnetic radiation. Tables contain not only scattering coefficients for incident plane wave polarized parallel to cylinder axis, but also those for incident radiation polarized normal to this axis.</p>	<ol style="list-style-type: none"> <li>1. Light - Scattering</li> <li>2. Light - Refraction</li> <li>3. Cylinders, Dielectric</li> <li>4. Radiation, Electro-magnetic</li> <li>5. Scattering - Measurements</li> </ol> <p>I. Title II. Libelo, Louis F.</p> <p>Abstract card is unclassified.</p>
<p>Naval Ordnance Laboratory, White Oak, Md. (NOL technical report 62-161) SCATTERING OF LIGHT AT NORMAL INCIDENCE BY DIELECTRIC CYLINDERS WITH REFRACTIVE INDEX IN THE RANGE <math>m = 1.400</math> to <math>m = 3.00</math>— SCATTERING COEFFICIENTS (U), by Louis F. Libelo. 24 Sept. 1962. 122p. tables. UNCLASSIFIED</p> <p>For the refractive indexes <math>m = 1.40, 1.50, 1.60, 2.00</math>, and <math>3.00</math>, tables of complex scattering coefficients are presented. Coefficients arise in problem of scattering by homogeneous, isotropic, dielectric, infinite circular cylinder of normally incident, linearly polarized, plane electromagnetic radiation. Tables contain not only scattering coefficients for incident plane wave polarized parallel to cylinder axis, but also those for incident radiation polarized normal to this axis.</p>	<ol style="list-style-type: none"> <li>1. Light - Scattering</li> <li>2. Light - Refraction</li> <li>3. Cylinders, Dielectric</li> <li>4. Radiation, Electro-magnetic</li> <li>5. Scattering - Measurements</li> </ol> <p>I. Title II. Libelo, Louis F.</p> <p>Abstract card is unclassified.</p>
<p>Naval Ordnance Laboratory, White Oak, Md. (NOL technical report 62-161) SCATTERING OF LIGHT AT NORMAL INCIDENCE BY DIELECTRIC CYLINDERS WITH REFRACTIVE INDEX IN THE RANGE <math>m = 1.400</math> to <math>m = 3.00</math>— SCATTERING COEFFICIENTS (U), by Louis F. Libelo. 24 Sept. 1962. 122p. tables. UNCLASSIFIED</p> <p>For the refractive indexes <math>m = 1.40, 1.50, 1.60, 2.00</math>, and <math>3.00</math>, tables of complex scattering coefficients are presented. Coefficients arise in problem of scattering by homogeneous, isotropic, dielectric, infinite circular cylinder of normally incident, linearly polarized, plane electromagnetic radiation. Tables contain not only scattering coefficients for incident plane wave polarized parallel to cylinder axis, but also those for incident radiation polarized normal to this axis.</p>	<ol style="list-style-type: none"> <li>1. Light - Scattering</li> <li>2. Light - Refraction</li> <li>3. Cylinders, Dielectric</li> <li>4. Radiation, Electro-magnetic</li> <li>5. Scattering - Measurements</li> </ol> <p>I. Title II. Libelo, Louis F.</p> <p>Abstract card is unclassified.</p>